

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
MINISTRY OF ENERGY AND MINES
GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR: 2001/2002

REPORT #: PAP 01-46

NAME: RAGNAR BRUASET

D. TECHNICAL REPORT

- One technical report to be completed for each project area.
- Refer to Program Regulations 15 to 17, page 6.

SUMMARY OF RESULTS

- This summary section must be filled out by all grantees, one for each project area

Attached a copy of Assessment Report on
the year 2001 Engine Leach/Geologic
Survey of the Golden Runner Project
by R. U. Bruaset

Information on this form is confidential for
one year and is subject to the provisions of
the Freedom of Information Act.

Name R. U. Bruaset Reference Number 90

LOCATION/COMMODITIES

Project Area (as listed in Part A) Golden Runner MINFILE No. If applicable _____
Location of Project Area NTS 92E/10 Lat. 58°34'0" Long. 120°40'30"
Description of Location and Access Andrew Lake area, Kamloops M.P.

Prospecting Assistants(s) - give name(s) and qualifications of assistant(s) (see Program Regulation 13, page 6)

NA

Main Commodities Searched For Cu - Au (alkaline porphyry)
As - epithermal

Known Mineral Occurrences in Project Area About 3/4 km EAST OF THE project area,
near Paper Lake, occurs a significant stock work rock deposit found only
a major in 1979

WORK PERFORMED

- Conventional Prospecting (area) 12 km²
- Geological Mapping (hectares/scale) 12 km²
- Geochemical (type and no. of samples) Enhanced Engine Leach: 306 samples at 150 m
interval on ~300 m spaced lines, 2 rock samples
- Geophysical (type and line km) _____
- Physical Work (type and amount) _____
- Drilling (no. holes, size, depth in m, total m) _____
- Other (specify) _____

1
FEEDBACK: comments and suggestions for Prospector Assistance Program

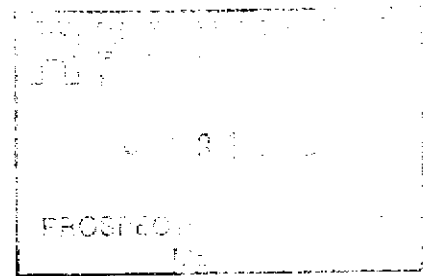
THIS project would not have been done
without the P.A. Program.
This type of project is extremely analytical cost sensitive. However,
in my opinion it is the cheapest and most cost effective survey that
can be done considering the large sample spacing and the
fact that results - meaningful results - frequently are obtained for
about 40 elements.

this type of survey has wide applicability in the interior of BC where large
areas of separable ground are either drift covered or
covered by Tertiary volcanics.

in the case of Target A (the IPB anomaly) we have a variety of data
including IP & multi-element soil geochem. Unquestionably the
target indicated by the EL makes more sense - hyper-than-gang indicated by
the IP and other geochem - even on a combined basis. In fact if one had some
geochem that one could be using to define a system. This type of geochem
by drilling would be the most effective - cost effective method of
evaluating such an area. Indeed there are people who strongly believe in the method
of EL and who "nick-name" it "chemical IP". They are saying the method
is superior to IP and will be the first to agree. Ref

ASSESSMENT REPORT

ON THE YEAR 2001



ENZYME LEACH AND GEOLOGICAL

SURVEYS OF THE GOLDEN RUNNER PROJECT

G.R. 3, 4, 7, 8, RABBIT # 1, #2, #3, #5, 41, 43 M.Cs,

IN THE ANDREW LAKE AREA, KAMLOOPS M.D., B.C.

LAT. AND LONG. 50° 34' 00'', 120° 40' 30''

NTS 92I/10E

OWNERS: R.U. BRUASET, D.L. COOKE

OPERATOR: R.U. BRUASET

REPORT BY: R.U. BRUASET, BSc

JANUARY 30, 2002

WORK CARRIED OUT: JULY 13-SEPT. 15, 2001

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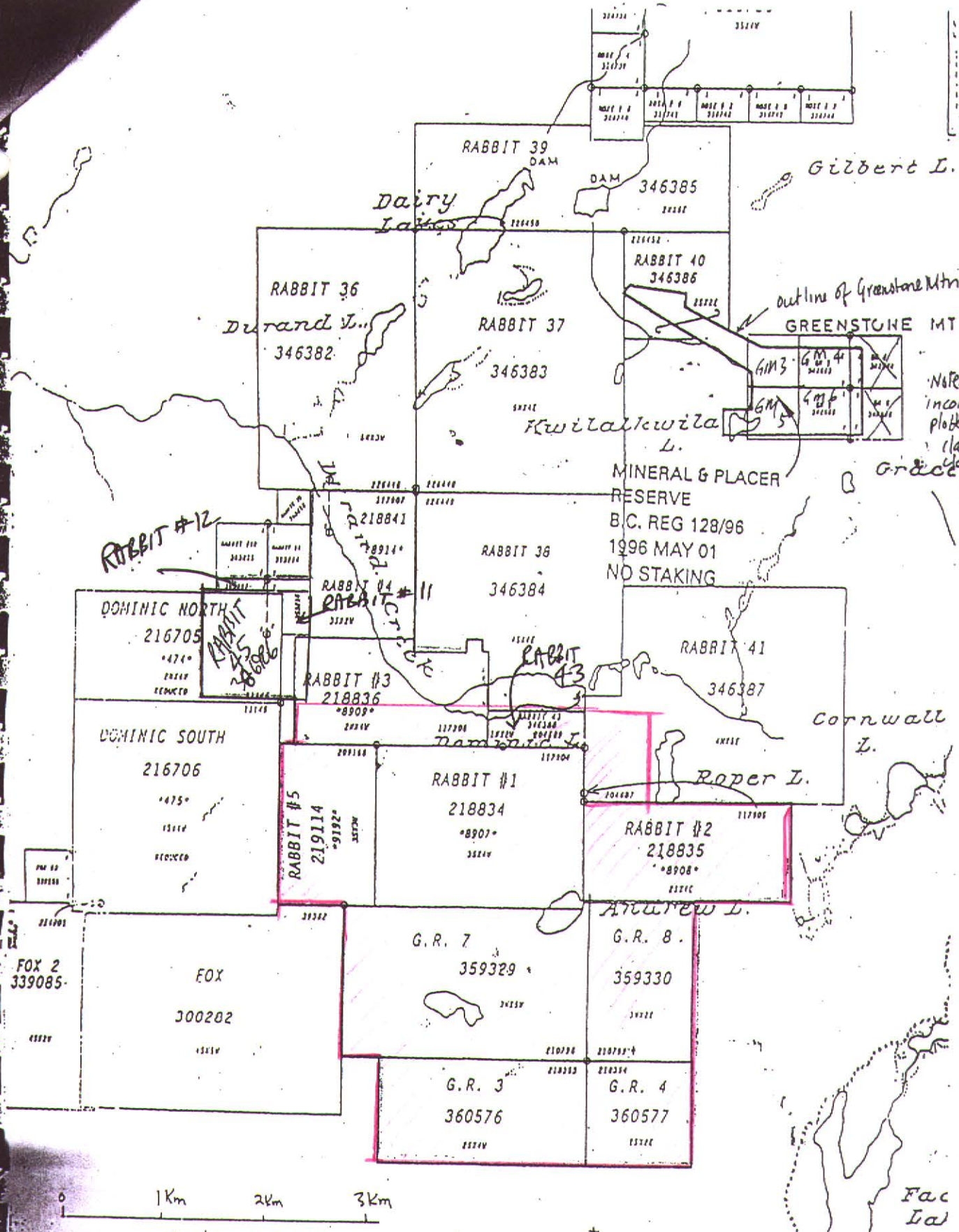
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ENHANCED ENZYME LEACH DATA SHEETS Lab. Rpt 22673.RPT.XLS
ECO-TECH LABORATORIES ICP Cert. 2001-246

Goldenrunner A.R.11



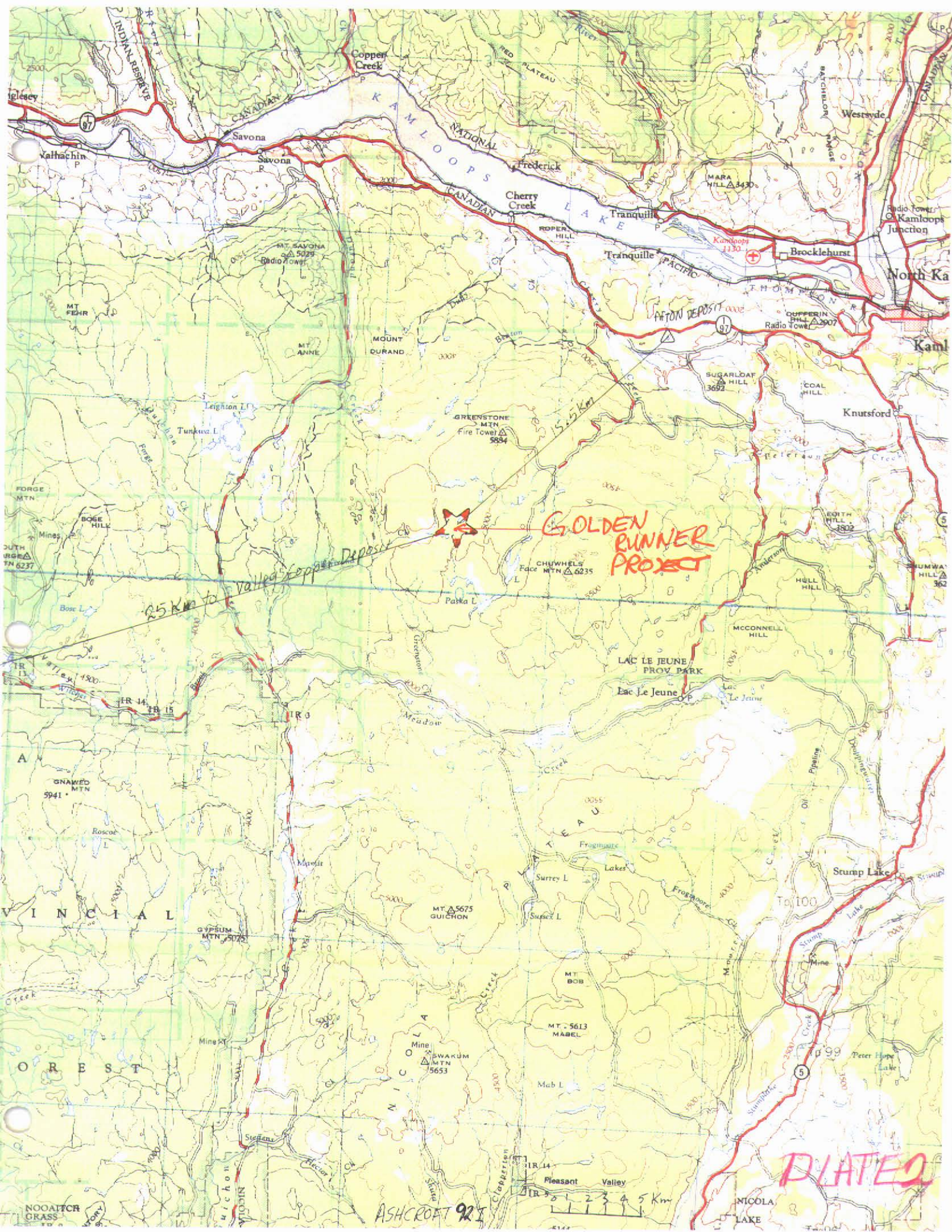
NOTE: GM 3-6
incorrectly
plotted on Govt.
claim map. These
claims are as
shown on this
revision.
RUB

MINERAL & PLACER
RESERVE
B.C. REG 128/96
1996 MAY 01
NO STAKING

GOLDEN RUNNER
2001-1 GROUP
(TOTAL 82 units)

RABBIT PROPERTY
CLAIM MAP
PLATE 2
921/06

PLATE 1



INTRODUCTION

The Golden Runner Project of 2001 was an integrated geological and geochemical program targeting alkaline porphyry Cu-Au and epithermal gold. It involved 1:5000 scale mapping and Enhanced Enzyme Leach (EEL) sampling. The results of this geochemical survey are highly encouraging, with three oxidation halo anomalies indicated (Plate 6). The presence of anomalous magnetite and a monzodiorite dyke suggests the presence of an alkaline porphyry environment in the principal target. This EEL survey has dramatically enhanced the attractiveness of this property.

The project-area is 12 square km and centered on Andrew Lake which is located about 25 km WSW of downtown Kamloops in south-central B. C.

The local physiographic division is the Thompson Plateau (Physiographic Map of the Canadian Cordillera, GSC map 1701 A).

The Eastern volcanic facies (EVF) of the Upper Triassic Nicola Group underlie most of the project area (Monger, McMillan, 1989). The EVF of the Nicola Group, and its correlative in the Takla Group to the north, comprise the main alkaline porphyry belt of B.C. That belt includes the following mineralized districts: Copper Mountain, the Aspen Grove area, Iron Mask-Durand stock district, in which the current project is located, Mount Polley-Quesnel River and Mount Milligan. The most authoritative publication on alkaline porphyries of the northwestern Cordillera of North America is CIM Special Volume 46 edited by T.G. Schroeter.

A comprehensive compilation of geological, geochemical, geophysical and drilling information preceded the 2001 Golden Runner project. That compilation in early 2001 had indicated two drill targets in the current project area: one at 0.4 km by 2 km and the other at 0.8 km by 1.4 km. The first is known as Target A and the second as Golden Runner (Plate 6). The dimensions of these targets and the scarcity of exploration funds, made it highly desirable that these targets be precisely defined. It was considered that the most cost-effective method to achieve the desired target definition would be through selective extraction Enhanced Enzyme Leach (EEL). The author had previously carried out successful Enzyme Leach surveys. The order-of-magnitude lower detection limits for many of the elements are definitely worth the extra cost as is the availability of patterns for gold.

The subject survey was carried out on claims variously owned by R.U. Bruaset and David L. Cooke.

PROPERTY, TOPOGRAPHY, ACCESS AND GLACIAL DIRECTION

The property is situated on the interior plateau. The terrain is gently rolling and forested with lodgepole pine, spruce and balsam fir. Local relief is about 170 m. Elevations range from 1539 m at Dominic Lake in the north to 1662m about 1 km south of that lake; to 1493m in the south-end of the grid. There are numerous areas of low wet ground within the grid area and a total of three small lakes (Plate 3).

Substantial portions of the project area were clear-cut during the mid-1980s and early 1990s. Plate 3 provides some indications of the locations of clear-cuts.

The project area is typically snow-covered from November to the end of April. No detailed information is available on seasonal temperatures. Snow depths rarely exceed 1 meter.

Access to the project area from the Lac Le Jeune interchange on the Coquihalla Highway is via Meadow Creek Road a distance of 8 km westward towards the village of Logan Lake. An all-weather gravel road known as Paska Lake Road and the Dominic Lake logging road, for a combined distance of 12 km, provides access to the south eastern grid area from Meadow Creek Road.

The general direction of glacial transport in the area is south to SSE based on information from drift ridges and striae published in GSC Memoir 249 and transportation of float boulders.

The following claims were surveyed:

Claim name	Owner	Tenure number
G.R. 3, 4	R. Bruaset	360576, 77
G.R. 7, 8	"	359329, 30
RABBIT # 1, #2, #3	R. Bruaset, D. Cooke	218834, 35, 36
RABBIT # 5	"	219114
RABBIT 41, 43	"	346387,

REGIONAL GEOLOGY

The principal current regional geological reference is the 1: 250,000 scale Ashcroft sheet (G.S.C. Map 42-1989 by Monger, J.W.H. and McMillan, W.J.)

The region is underlain by the Eastern volcanic facies of the Upper Triassic Nicola Group. Regionally, this facies is described as mafic, augite and hornblende porphyry bearing breccias and tuff and locally intercalated argillite.

The project area encompasses the southern extension of a prominent aeromagnetic anomaly centred 1 km north of Dominic Lake (GSC Geophysics Paper 5217, Cherry Creek 92I/10). This anomaly is centered on the Durand stock a zoned diorite-monzonite intrusion indicated to be coeval with the Nicola Group volcanics. The granodiorite composition of the stock, as indicated by this regional map, is a reflection of the previous regional geological map, the 1947 Nicola sheet (GSC Map 886 A). The composition of the Durand stock has been firmly established through extensive feldspar etching and staining and petrographic work by the author, and others, in the early 1970s. J. Monger (pers. comm.) has told the author that he does not dispute the alkaline classification of this intrusion acknowledging a lack of modern GSC data from the area. Gold and copper are the principal valuable metals found to date in the Upper Triassic rocks of the area.

The Upper Triassic in the general Dominic Lake project area is intruded by Early Cretaceous granite and dioritic feldspar porphyry collectively referred to as the Roper Lake intrusives (RLI). Small outcrop areas of RLI are found in the project area. These are thought to represent cupolas and dykes related to a substantial calc-alkaline body occurring at shallow depth within the Project area. Gold and molybdenum are the principal commodity elements found to date in the Roper Lake intrusives.

Strong through-going northerly trending faults can be inferred from drilling, mapping and regional aeromagnetic trends. Similarly, east-west structural trends are indicated. Evidence of Tertiary magmatic activity along the E-W trends exists, and these offer potential for epithermal gold.

PROPERTY GEOLOGY

Mapping at a scale of 1: 5000 was carried out (Plate 3). The current grid was used for ground control. In the northern 1/3 of the map-area extensive traversing was done using the underlying Noranda grid from 1990. The old grid provides 200 m spaced lines, some of which were chain sawn.

Intrusive rocks were classified by a ternary diagram from the IUGS Streckeisen classification (GEOTIMES Oct. 1973). Volcanic rocks were classified according to Manual of Field Geology by Robert Compton, 1965.

Specimens were sawn and subjected to standard feldspar etching and staining involving hydrofluoric acid and sodium cobaltinitrite.

Outcrops are shown on a grid plan as well as fracture attitudes and bedding. Outcrops are extremely scarce in most of the map area. Frequently, the only bedrock found in an area is that occurring under an overturned root. However, the general overburden depth in the project area is probably rarely more than a few meters.

The main elements of the geology are as follows:

1. The area is mainly underlain by flows and pyroclastics of the Upper Triassic Nicola Group.
2. In the "hill area" near 3+00N on L. 18+00W a 1m wide monzodiorite dyke containing minor disseminated chalcopyrite was found. This dyke is thought to be Nicola-age and if that is correct, a possible alkaline porphyry environment may be present in the subsurface in the area of the central low known as AREA A (Plate 15b). The small amounts of pyrite found in these rock do not explain the observed IP. Another interesting aspect of the geology of the hill area is the occurrence of disseminated magnetite in the volcanics. Mapping in the known alkaline porphyry environment of the Durand stock just north of Dominic Lake has shown the country rock of that intrusion to containing substantial magnetite only in close proximity to the intrusion. In fact, a few tens of meters away from the contact the volcanics are non-magnetic relative to the pencil magnet. In the "hill area" most of the volcanics are moderately magnetic suggesting these volcanics are probably capping comagmatic Upper Triassic intrusive occurring at shallow depth. Accordingly, the position of the principal central low in the current Enhanced Enzyme Leach survey is most interesting and encouraging.
3. On the eastern edge of the grid at 6+00S on L. 0+00W a lapilli tuff outcrop contains fragments of medium grained syenite indicating rocks typically associated with alkaline porphyry systems have erupted. This material is similar to Nicola volcanic breccia a short distance west of the Afton deposit. There, Cherry Creek monzonite, the host of the Afton deposit, form fragments in the breccia. Further, on the Golden Runner fine, well-bedded clastics outcrop about 0.7 km WSW of the syenitic lapilli-tuff forming what appears to be a distal volcanic facies.
4. Leucocratic intrusive with minor quartz eyes and low K-spar occur in the western grid area and extending intermittently for about 2.5 km. Compositions are diorite to quartz monzodiorite. This material is thought to be related to the E. Cretaceous Roper lake magmatic event. Some of the Roper Lake rocks have been found to contain substantial geochemical levels in gold, to 500 ppb, in the area north of Dominic Lake. Two samples of leucocratic intrusive were analyzed for gold and in all cases gold was found to maximum 25 ppb. In one particular case, near 25+50S on L. 15 W, a large angular mass of diorite cut by an impressive set of parallel quartz veins was found. The source of the material remains unknown. It would appear that this material had broken off a larger block in the course of post-logging reclamation. The strength of veining suggests further work should be done.
5. No case of what one would call spectacular base-metal mineralization has ever been uncovered in the grid area. It would appear, however, that disseminated chalcopyrite and structurally controlled copper mineralization are more prevalent in the general hill area than anywhere else in the grid.

EXPLORATION HISTORY OF THE 2001 GRID AREA

Various exploration companies have contributed to the knowledge of the grid commencing with Kennco in 1960. The B.C. Assessment Report file records important work by Dominic Lake Mining, Noranda and others.

The earliest operators targeted stockwork molybdenum, Cu-Mo and Cu-Au porphyries. The author was the first operator to target gold deposits and this began with systematic bark sampling using the methods recommended by Colin E. Dunn, geochemist with the Geological Survey of Canada. This led to the definition of the Golden Runner. The "head" and the "chest" areas of the 'runner' featured strong multi-element anomalies and unusually strong gold response, respectively. The 1993 Enzyme Leach orientation survey and the current systematic grid based Enhanced Enzyme Leach program have enhanced the various biogeochemical anomalies within the 'runner'. Following the completion of the 2001 Enhanced Enzyme Leach survey, one is less likely to continue to ignore these anomalies.

ENZYME LEACH THEORY

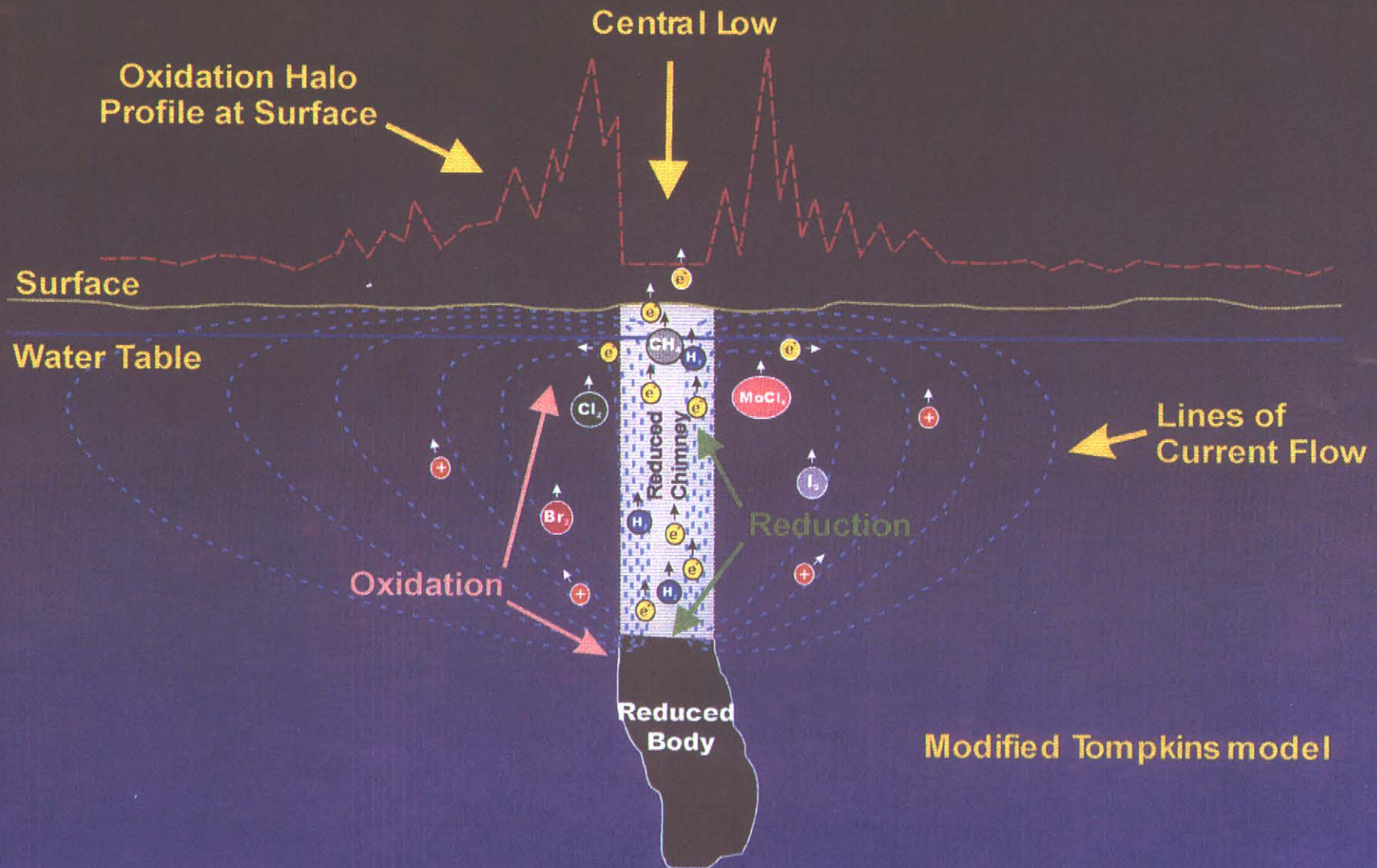
This section provides some basic information on the theories and nomenclature of Enzyme Leach. Dr. J. Robert Clark of Activation Laboratories Ltd. has provided a Manual describing concepts, and models for interpretation of Enzyme Leach data in mineral and petroleum exploration (34pp. of text). Information about the basic genetic model-the Tompkins Model-is found in Oil & Gas Journal, Sept. 24, 1990 p. 128. Additional information has come from notes from EL workshops given by Dr. Clark. Please refer to Plates 13 and 13b in the present report.

Comprehensive papers describing Enzyme Leach surveys are not plentiful. An excellent paper co-authored by a highly respected geochemist is Dunn, et al, 1998. This most compelling work details the Enzyme Leach response of the Bromhead oil pool situated at a depth of 2850 in southeastern Saskatchewan. This paper is pertinent to metals environments because identical patterns occur in both environments.

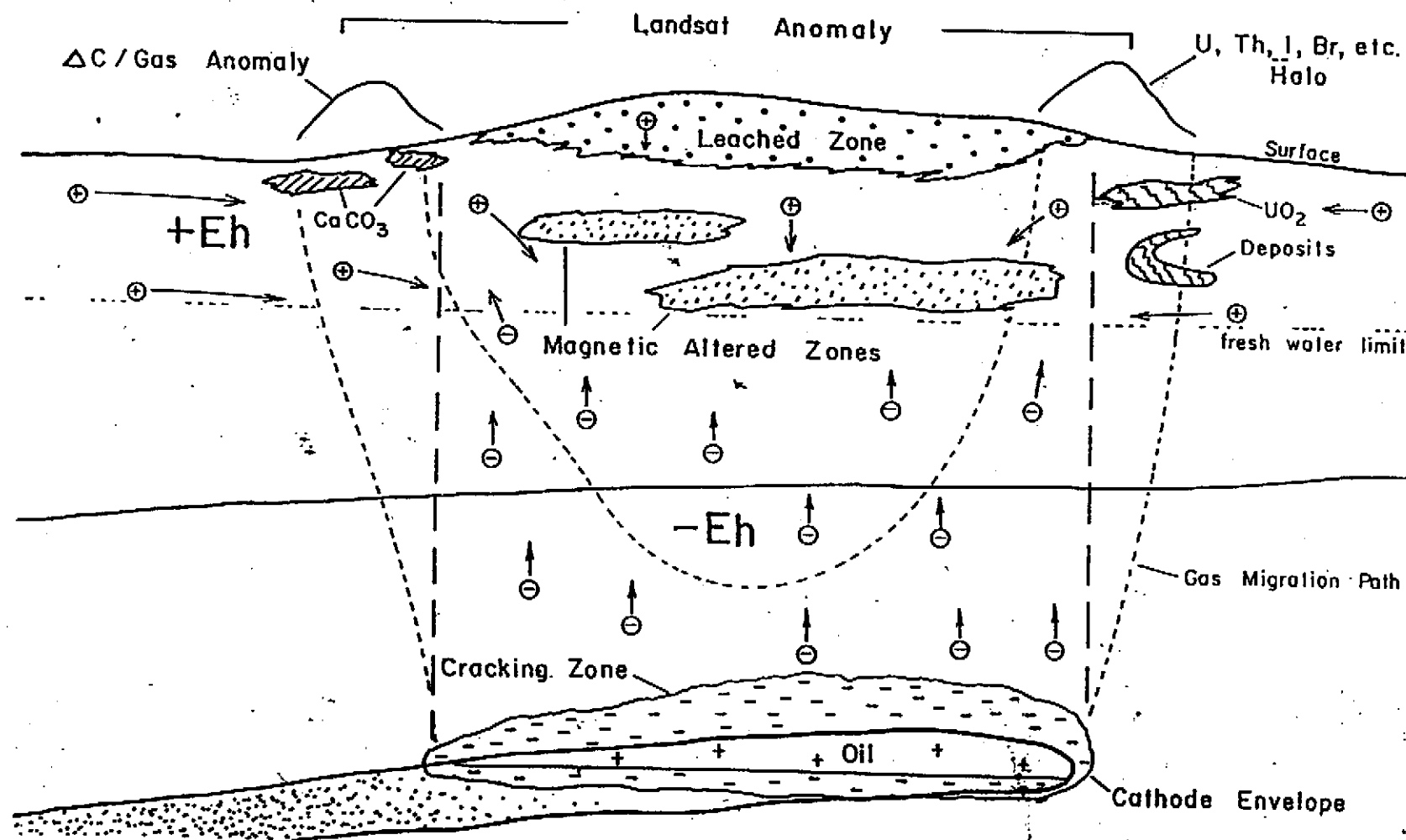
1. Enzyme Leach (EL) is a highly selective analytical extraction used primarily for detecting extremely subtle geochemical anomalies in B-horizon soils. Pattern recognition is the key to proper interpretation of EL data, since anomaly patterns are quite different from conventional geochemical data. The analyses in the current survey were done by Enhanced Enzyme Leach (EEL) a technique providing enzyme leach data with detection limits frequently an order of magnitude lower than standard EL.

2. Over geologic time, extremely small amounts of trace elements related to an ore body or petroleum reservoir, move by various mechanisms towards the surface where they are trapped in oxide coatings on mineral grains in the soil. Amorphous MnO₂ is on

Electrochemical Cell Between Reduced Body in Subsurface and Atmosphere



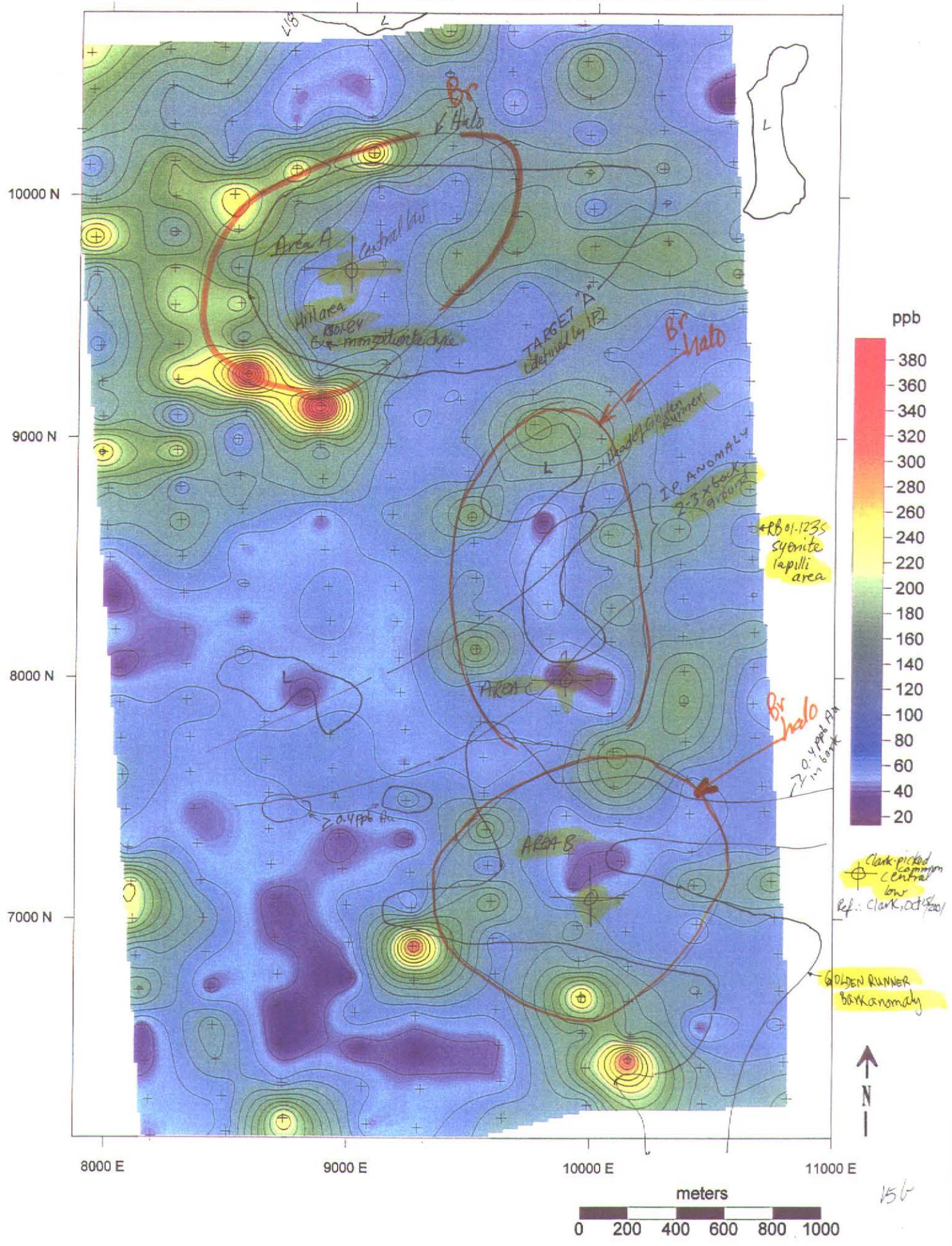
Multi-Anomaly Generation Concept for Direct Location Technologies



Ref. Tompkins, Reed
Oil & Gas Journal
Sept. 24, 1990 p. 126

136

copy 158



of the most effective traps for a wide variety of cations, anions and polar molecules that may be migrating to the surface. Because of the efficiency of this trapping material, the locations of EL anomalies are generally independent of the quantity of leachable Mn in the soils.

3. The EL makes use of an enzyme-catalyzed reaction to selectively dissolve the most reactive form of MnO₂ in soils, the amorphous form of the compound.

4. Currently EL anomalies are classified two ways: by morphology and genesis. Morphologically, the three commonly recognized forms are: 1. halo anomalies; 2. apical anomalies; 3. combination anomalies. Genetically, there are also three classes: A. oxidation anomalies (sometimes referred to as oxidation halos, where they form a morphological halo); B. diffusion anomalies, which result from gradual thermodynamic dispersion of a highly concentrated source; C. mechanical/hydromorphic dispersion anomalies.

5. Oxidation anomalies appear to be caused by very subtle electrochemical cells that develop at the top of reduced bodies in the subsurface. A reduced body is a concentration of reduced material, whether sulphide or hydrocarbon material such as bitumen, or material that has deficiency in oxygen; the term "most reduced" is often used and refer to the greatest concentration of reduced material (J.R.C, pers. comm. May/2001). Please refer to the modified Tompkins model and the Tompkins Model, both attached. According to Dr. J.R Clark: " a reduced chimney forms between the reduced body and the surface and the central low is a surficial geochemical expression of the reduced chimney. The area of oxidation (anode) is at the edges of the cathode (the reduced body and the overlying reduced chimney). Multiple cathodes occur when the reduced body has been physically broken up. The reduced chimney is a zone of excess electrons hence reduction is occurring. There is no HUGE flux of CH₄ and H₂. This is an extremely subtle process. CO₂ is an uncharged molecule, and will migrate vertically, regardless of current flow, and it probably is the carrier for the low-boiling point halides. (Clark: Written comm. May 1, 2001.)

6. Oxidation anomalies are characterized by very high contrast values for oxidation suite elements and this includes Cl, Br, I, As, Sb, Mo, W, Re, Se, Te, Au, V, U and Th. Rare-earth elements often accompany the oxidation suite. Base metals are sometimes anomalous in the same samples. Oxidation anomalies often form asymmetrical halos or partial halos around the buried reduced body.

7. Oxidation anomalies have been found associated with reduced bodies located up to thousands of m below the surface. In general, the contrast of the anomaly and the number of anomalous elements in a halo decline as the depth of the reduced body increases. Oxidation anomalies can be associated with any reduced body: porphyry-Cu deposits, base metal massive sulphide deposits, epithermal Au deposits, barren disseminated

7.

pyritic alteration, blocks of barren pyritic shale or black shale isolated as a horse within a fault or occurring as a graben between two normal faults. Any body of rock that contains more oxidizable material than the surrounding rock has the potential to produce one of these anomalies.

8. The suite of trace elements in the halo often is not indicative of the composition of the source.

9. *Apical anomalies are the most common morphological form of EL anomalies, and most of these are related to faults. Trace elements that are representative of the source are found as an anomaly directly over that source. If the source is a mineral deposit, many of the commodity/pathfinder/alteration trace elements that characterize the source are anomalous in the surface. When an apical anomaly is found associated with a sulphide-rich mineral deposit, it is because something is preventing a strong oxidation halo from forming.*

10. Combination anomalies have characteristics of both oxidation and apical anomalies. They usually occur where a weak to moderately strong oxidation cell occurs in the subsurface. As the strength of the oxidation cell increases, the trace elements that characterize the source migrate more and more into the halo anomaly, until the apical anomaly disappears.

ENZYME LEACH SAMPLING: GROUND CONTROL, SAMPLE COLLECTION, HANDLING, PREPARATION AND ANALYSIS

All sampling was done by the author using long handled tree planter's spades with spade dimensions 19 by 25 cm. Spade surfaces were clean steel.

Samples were collected at 150m-intervals along 300 m spaced hip chained and orange flagged lines. Sample bags were numbered with a project code RB a numerical code for the year followed by a station identifier (10 to 316 except 273). The complete sample number was noted on flagging at the sample site. Grid coordinates were not noted on sample bags. Sample number for each site was recorded on orange flagging tied to a branch. The approximate depth of each sample and the colour of the soil were recorded as well as the nature of any local disturbances. In the northern 1/3 of the grid it was not uncommon to have to dig as many as 3 sample holes at one site in order to obtain B Horizon soil. In fact many sites were flooded.

In the course of this survey, tie-ins were made to old grid lines and old identifiable sample sites. Relatively permanent features such as road, claim posts, trenches, cattle-guards, cut-block margins and drill holes were also tied-in.

These tie-ins will assist in reestablishing the grid when the flagging is gone. Grids in this area often succumb to the ravage of clear cutting loggers, cows and game animals.

The B Horizon soils range from brownish to reddish brown and ranged from clay to fine sand. Most of the soil in the area is till. Residual soil is locally present. This B Horizon was sampled at depths ranging from 17 to 25 cm. Samples were collected in conventional 10 by 26 cm gusseted Kraft soil envelopes. During a traverse soils samples were accumulated in large plastic sample bags in the pack-sack. Whenever samples were dropped off for later pick-up on hot days, care was taken to store samples in a shady location under cover of coarse woody debris. This eliminated any possibility of the samples being damaged by heat.

At camp, EEL sample were placed on sheets of plywood in a shelter and allowed to air-dry. In this way samples were generally kept out of direct sun light. In the course of this drying, the daytime air temperature generally exceeded 22 °C and occasionally reached 27°. Even the highest temperature, samples were well below the 40° C. above which amorphous manganese dioxide coatings begin to break down and drive off volatile halogens and halide compounds. Plywood erected around the drying site kept samples out of direct sunlight and allowed for good air circulation and complete drying.

As part of getting samples ready for shipment, sample bags were sealed with cellophane tape and placed in Ziploc bags. They were next placed upright and tightly packed in apple boxes and shipped by over night FedEx courier.

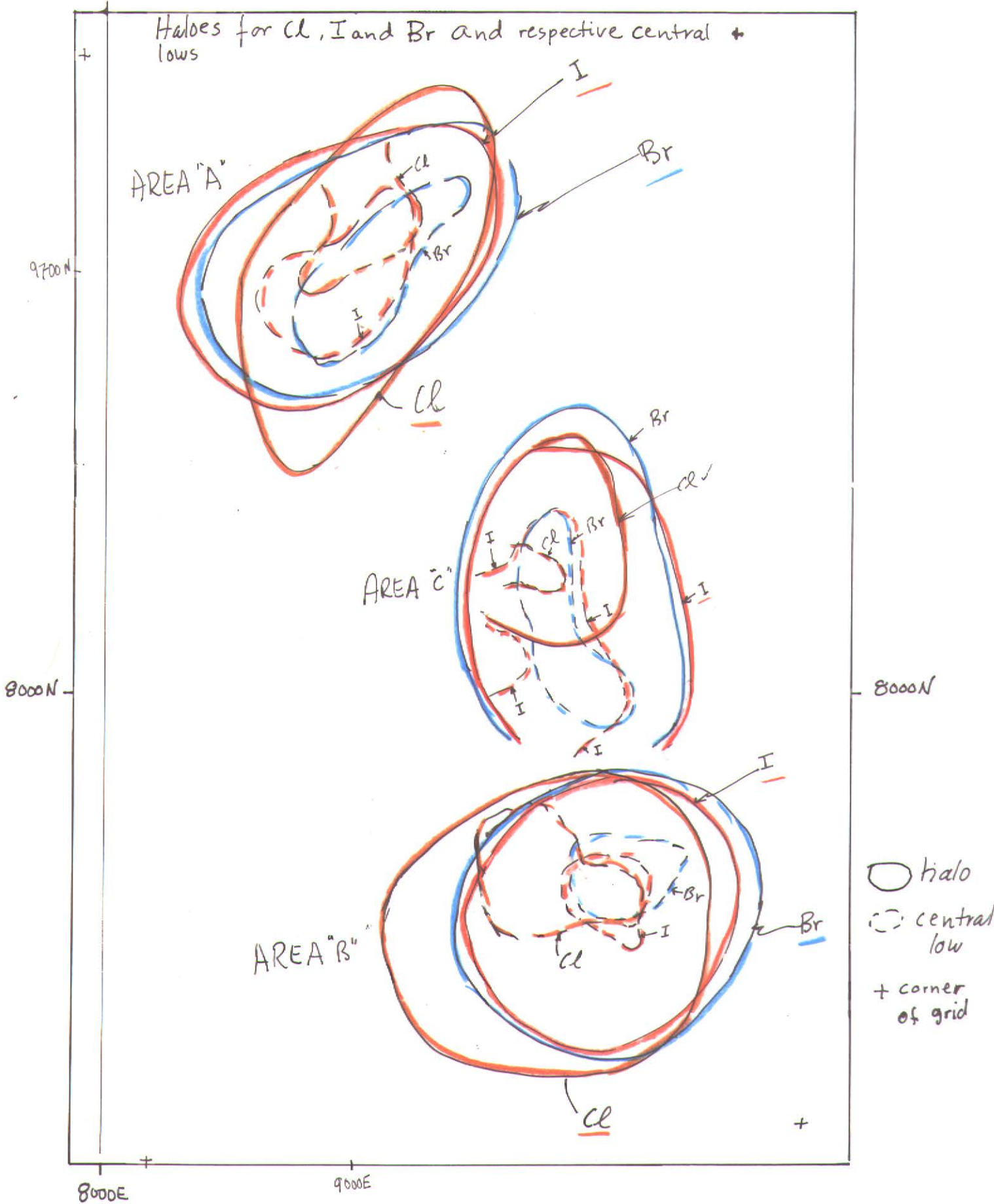
The suite consisted of 306 samples. These were broken into 3 shipments and send over a period of 3 days. Samples were sent to Activation Laboratories Ltd., Ancaster, Ontario. Sample preparation commenced following the arrival of the last shipment.

Following release of the data by Activation Laboratories, sample locations were digitized from a field plot. Sample locations were e-mail to Greg T. Hill of Actlab at Reno, Nevada. Mr. Hill prepared 56 single element colour plots at a scale of 1:20,000 using Surfer Version 7. Copies of these plots are contained in this report. Mr. Hill included a transparent overlay in which he pointed out the halos in Areas A and B based on lutetium and showed the central lows of rhenium and antimony in the same areas.

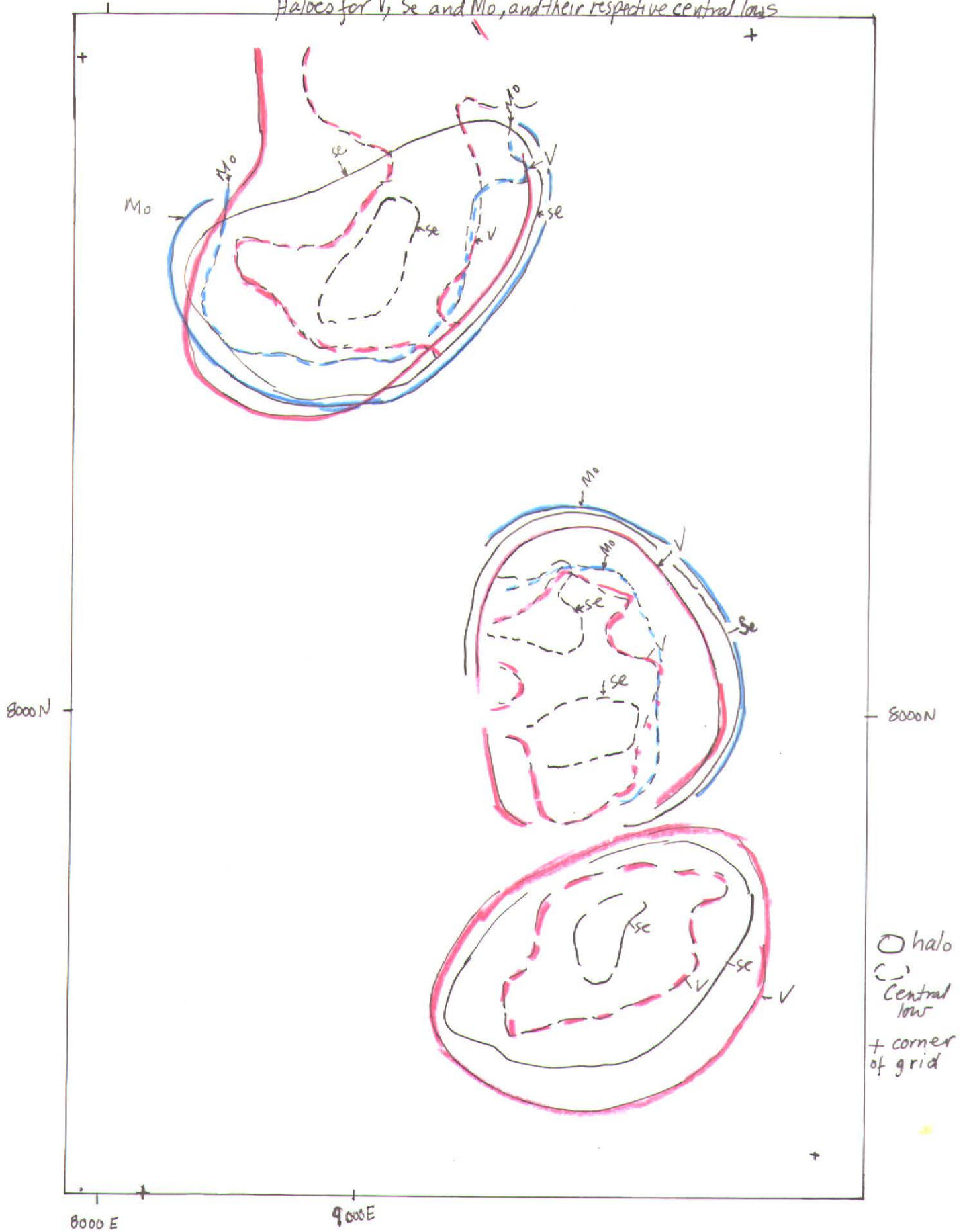
The standard procedure for interpreting EL data, as recommended by J.R. Clark, involves tracing out haloes and their central lows for oxidation suite elements. Gradually the common central lows are built up on consideration of many elements and those results are frequently supported by the metals group and the rare earths in the case of strong oxidation cells.

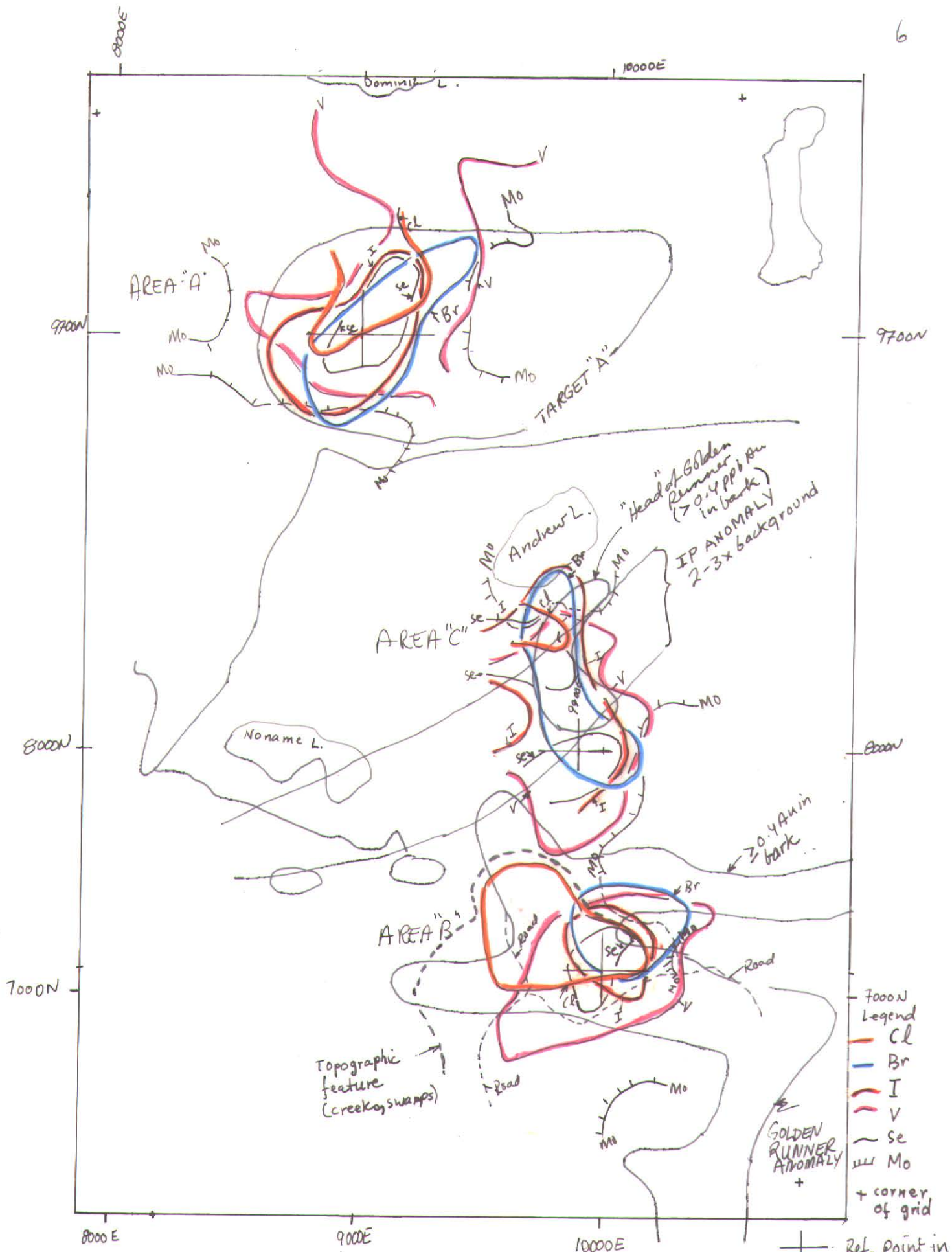
The common central lows of the oxidation suite tend to develop directly above the reduced body. Copies of some of the interpretive plots are attached with this report

Haloes for Cl, I and Br and respective central +



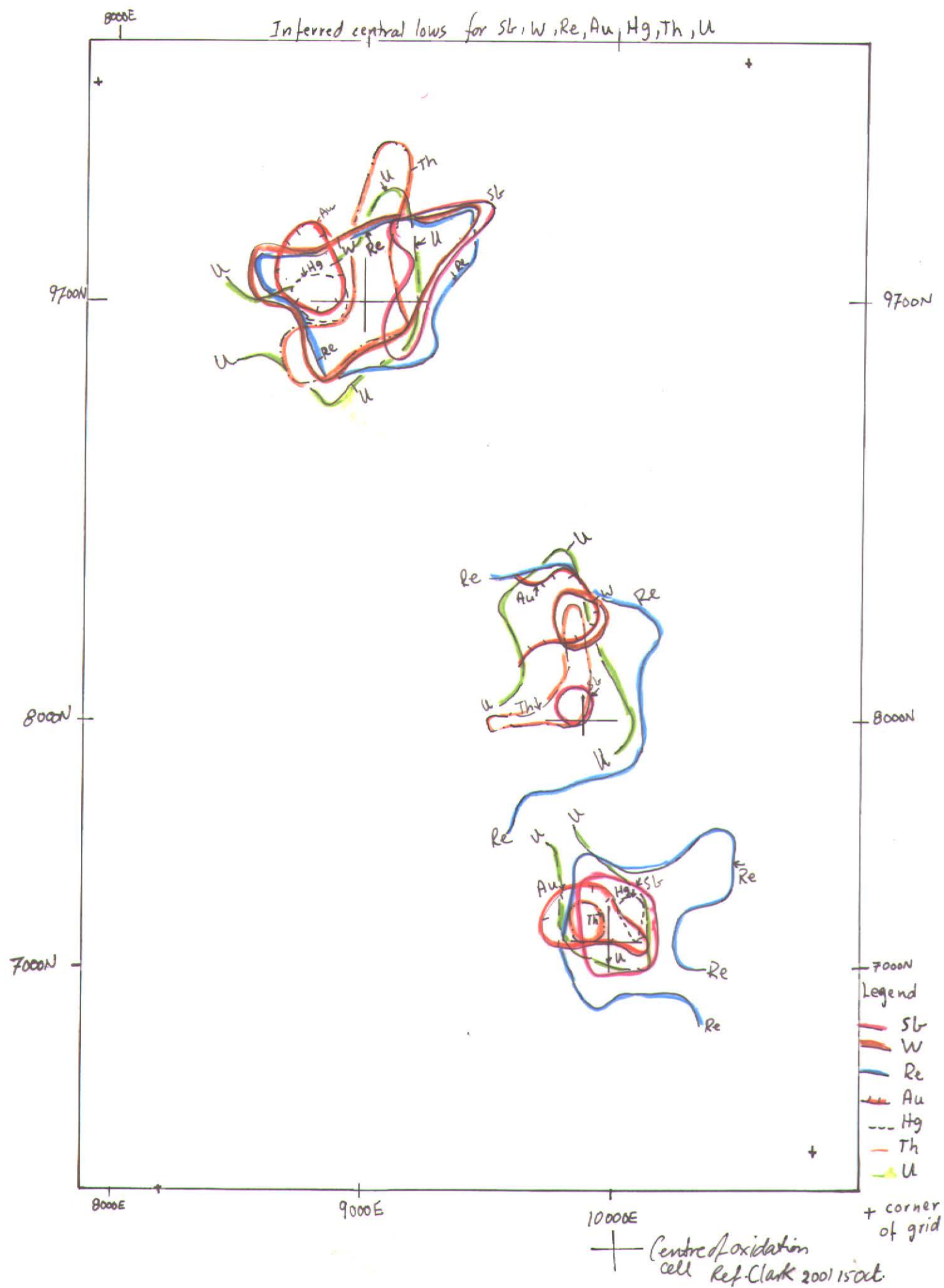
Halos for V, Se and Mo, and their respective central lows





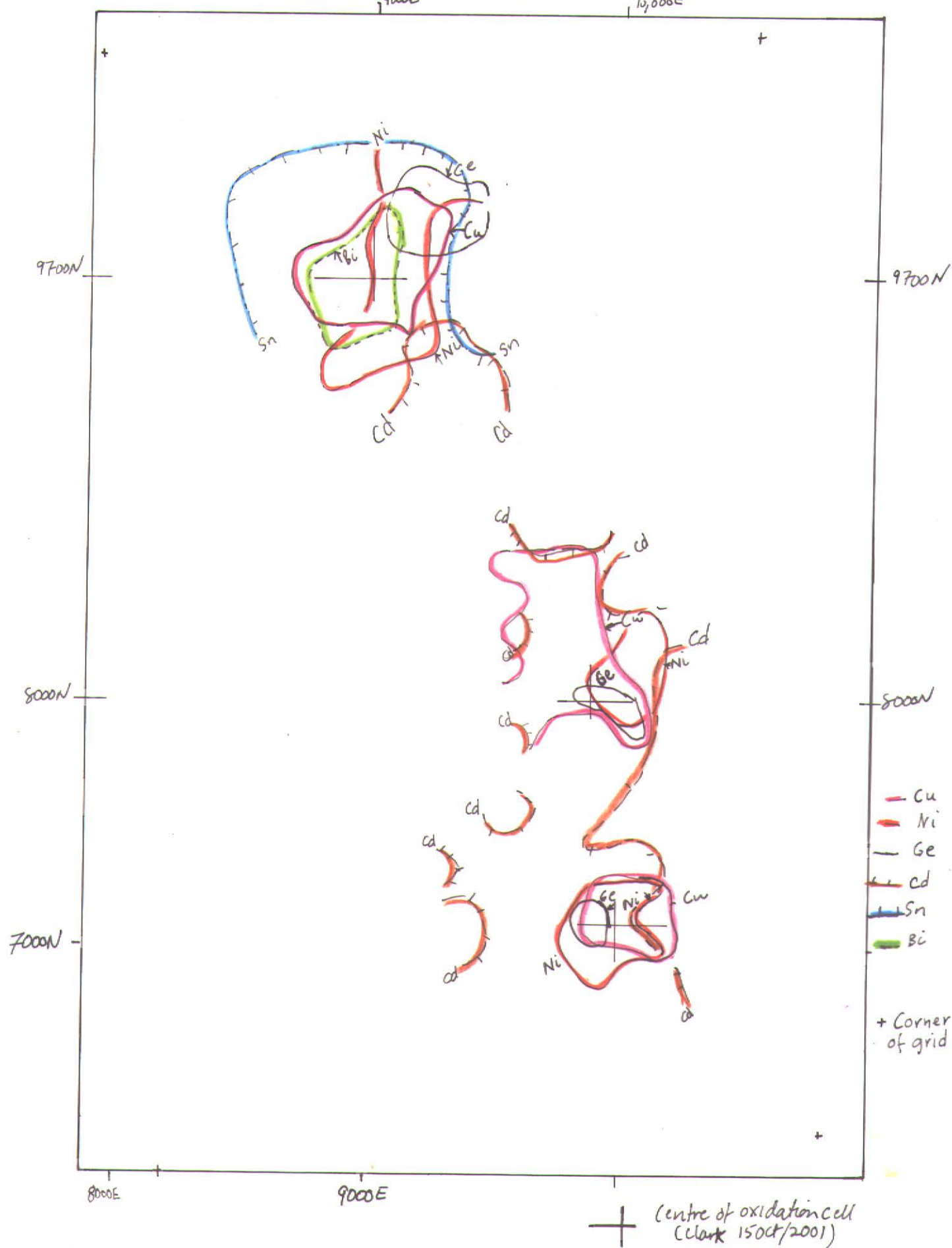
Inferred Central Laws for Cl, Br, I, V, Se, Mo (oxidation suite)

+ Centre of oxidation cell
 + Ref. point in J.R. Clark rpt dated 15 Oct 2001
 Ref. Clark 15 Oct 2001



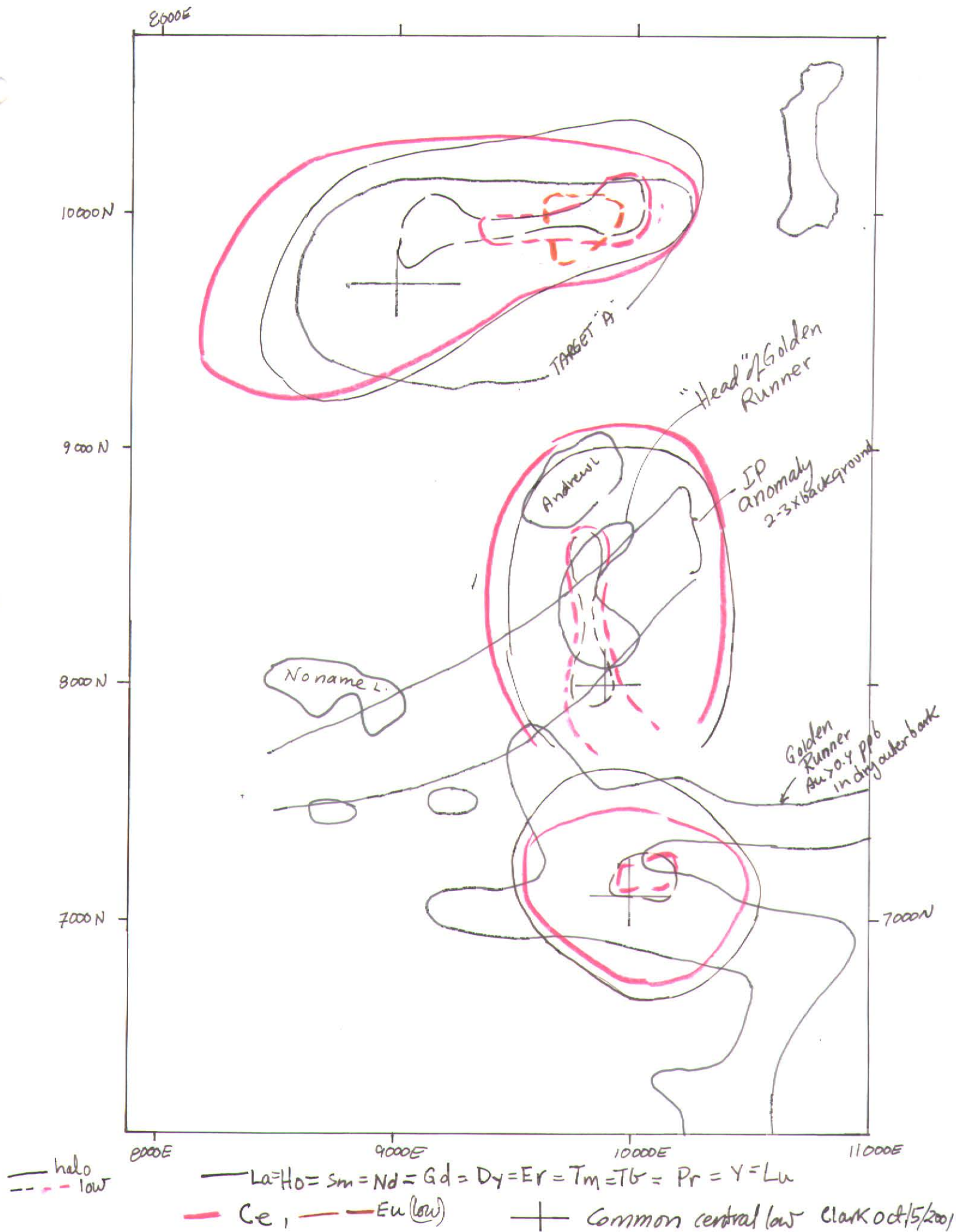
Metals Group : Inferred central lows for Ni, Cu, Ge, Cd, Sn, Bi

8

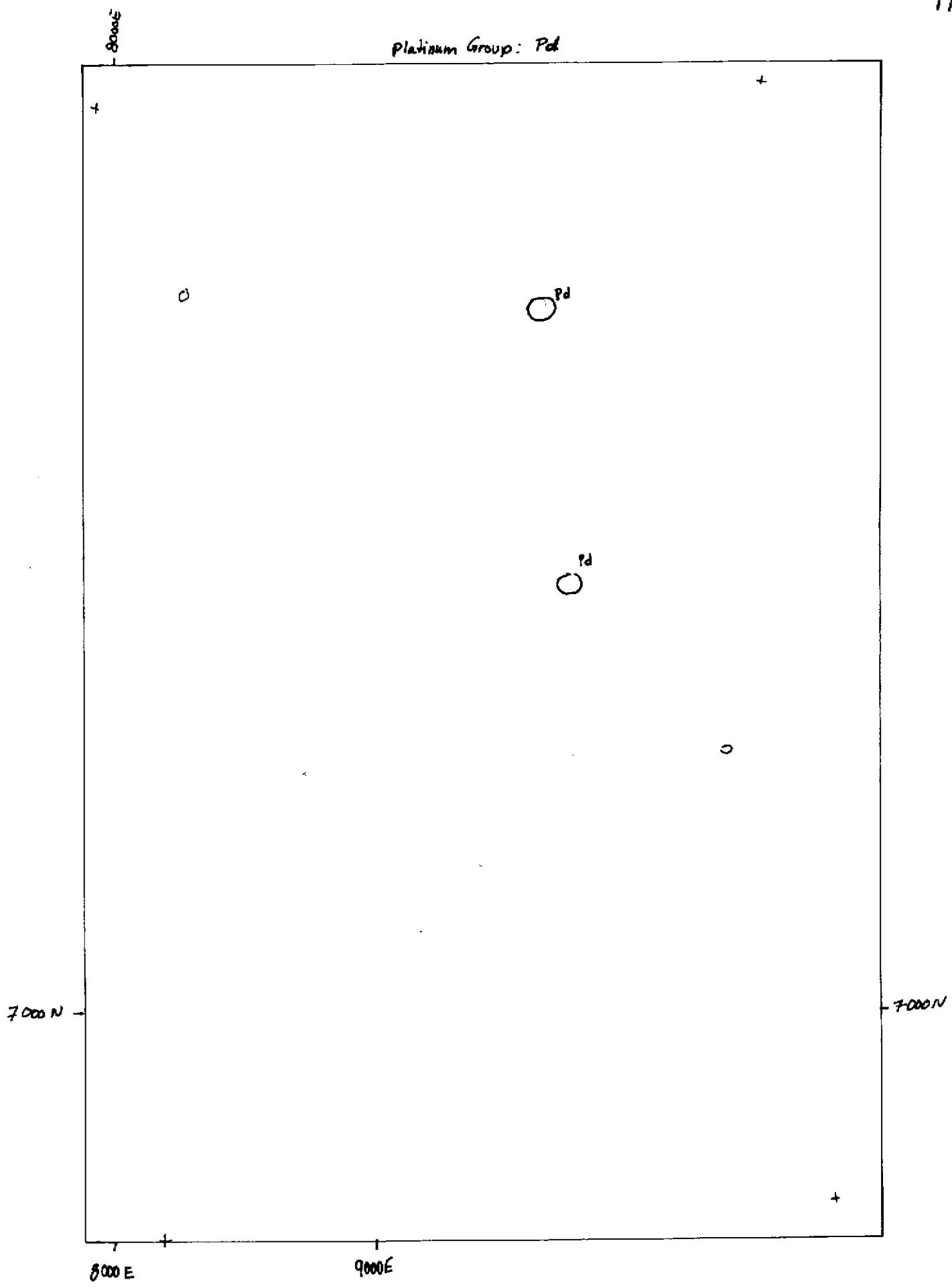


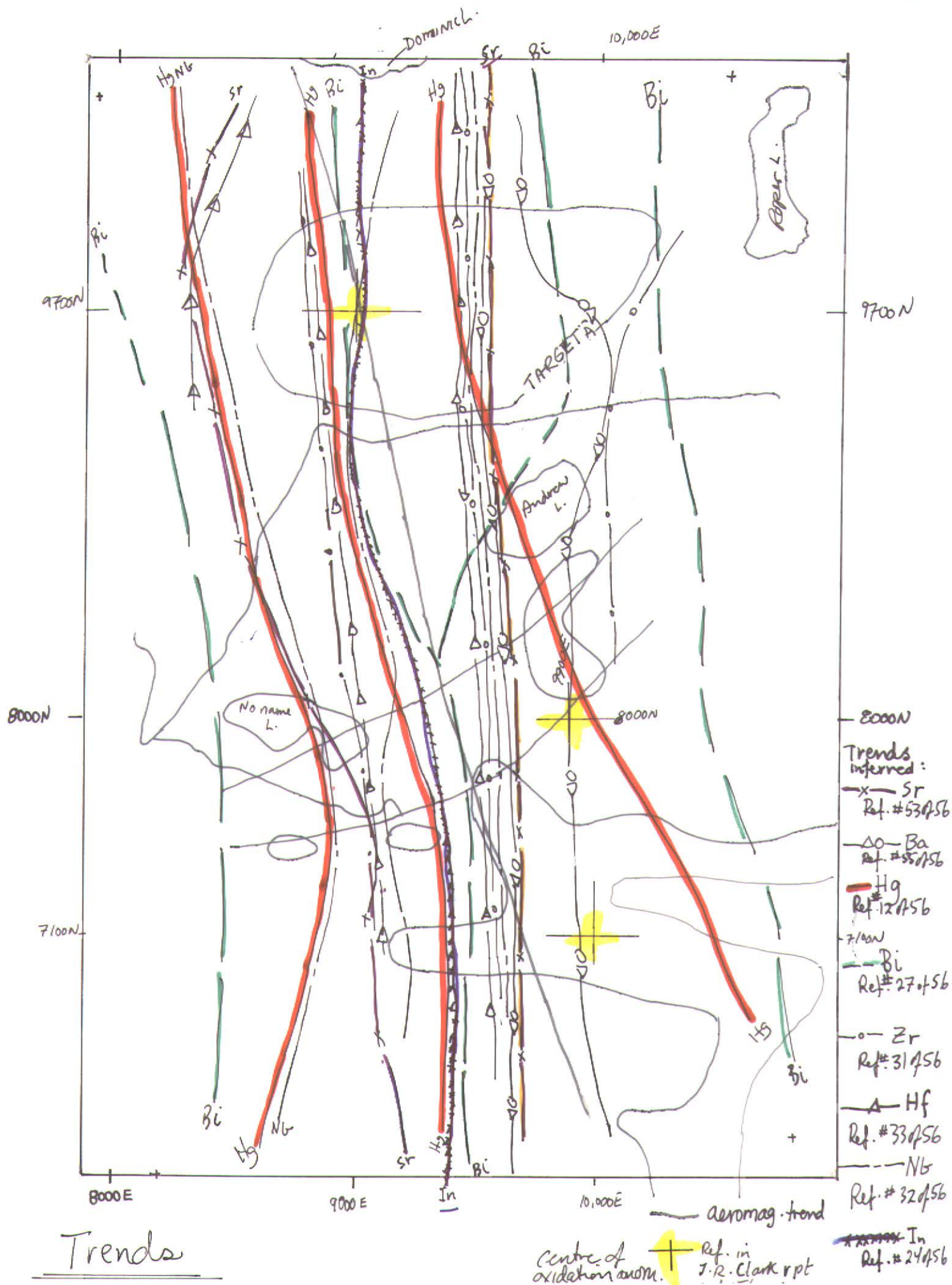
The diagrams illustrate the distribution of elements in the 5d transition metal series across different periods and groups. The elements are color-coded: Hf (red), Zr (blue), Nb (green), Ta (orange), and Y (purple). The diagrams show the relative positions of these elements in the periodic table, highlighting the 5d series and the lanthanide contraction.

+ Centre of oxidation cell
Ref. Clark Oct15/2001



Platinum Group: Pd





(Plates 4-11). An overlay showing apparent trends is also included (Plate 12). A set of the colour contour plots and Plates 4-12 were sent to J. Robert Clark for his comments. Dr. Clark's comments form a key portion of the report; are attached (Clark, 15 Oct. 2001).

INTERPRETATION

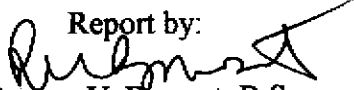
Based on the tracings of haloes and their respective central lows for the oxidation suite elements it would appear that three common central lows are indicated. A total of three reduced bodies would be inferred. These anomalies are designated as AREA A, B and C. on interpretive Plan 6. It is further apparent that some of the metals such as Cu, Ni and Cd, and others in some cases, have migrated into these haloes. As have the rare earths.

Table 2 provides a listing of the elements which form haloes and central lows in each of the three areas AREA A to C. The principal halo is Area A based on its strength and size. The reduced body causing this anomaly is postulated to occur under the hill. A few small outcrops of lapilli tuff and tuff of the Nicola Group occur in Area A and at one location a 1 m wide monzodiorite dyke was found (L18W 3+00N.). The fact that this dyke and many of the volcanic rocks in the area are moderately magnetic due to the presence of disseminated magnetite is considered most encouraging. This may indicate the existence of a covered Cu-Au associated alkaline intrusion in the "hill area". Mapping in the alkaline Durand stock and testing of the rock with the pencil magnet has suggested rapidly diminishing susceptibilities in the Nicola volcanics away from the dioritic intrusive. In fact, ground magnetics remains a most valuable tool for projecting the contact of the intrusion through drift covered areas. In that particular case, testing was done by a percussion drill and the area remains of ongoing of interest. In the present situation, where an unknown thickness of cover-rock seems to be present, determining that thickness is a key component of future testing. It is instructive to examine the various geological, geochemical and geophysical data from this area to see how anomalies defined by them compare to the EEL. Most of the exploration data from this area is variously available in Assessment Reports. The present 1:5000 scale map enables one to look at the various Assessment Report files and to compare the data on a unified grid basis.

Please examine Dr. Clark's two-page report in light of Maps 4-12. These plans illustrate the simple and effective interpretation techniques that can be employed on data of this type. Dr. Clark is the principal authority on Enzyme Leach having substantially developed the techniques and commercialized the process.

It is hoped that readers of this report will decide to try their own systematic Enzyme Leach survey. With some geological control and high confidence in the Enzyme Leach method one could progress quickly from concept to drill target by-passing conventional methods such as ICP-based soil sampling and IP.

GoldenrunnerAR.9

Report by:

 Ragnar U. Bruaset, B.Sc.

Enzyme-ACTLABS, LLC

Enzyme-ACTLABS, LLC
7778 Lewis Street
Arvada, CO 80005-3749

Phone: 303-424-4069
FAX: 303-420-7413
e-mail: clark@actlabs.com

15 October 2001

~~Ragnar C. Bruaset~~
~~5861 Halifax Street~~
Burnaby, B.C. V5B 2P4
CANADA

Dear Ragnar:

I have reviewed the Enhanced Enzyme LeachSM data plots prepared by Greg Hill for the work done on the Golden Runner Project this field season. One strong oxidation halo and one moderately strong halo are readily apparent in the plots of the data. Furthermore, what may possibly be a weak oxidation cell may also be present between the two stronger cells.

The stronger oxidation halo is centered at about 9700N x 9000E, and it can be distinguished in the plots for a number of the oxidation suite elements (Br, I, V, Se, Mo, Sb, W, Re, and Au) as well as the rare earth elements. Copper and Ni also have migrated into this halo pattern, centered on the same location. The Cu and Mo values in this halo are the highest in the survey, and they are high enough to suggest that the cause of the oxidation cell is a sulfide-rich reduced body in the subsurface that contains enrichments of Cu and Mo. Gold values in the Enhanced Enzyme LeachSM data are strong enough to indicate that Au is associated with Cu and Mo in the reduced body.

The second area of interest is defined by another oxidation halo centered at about 7100N x 10000E. Bromine, I, V, Se, Sb, W, Re, U, and weakly Au, define a halo in that area, which is also shown by the rare earth elements. Of the base metals, Ni and Cu also help to define this halo, while Zn forms two N-S linear trends that flank the central low of the halo. The source of this apparent oxidation cell also would appear to be a sulfide-rich zone in the subsurface, that contains some base metal enrichment.

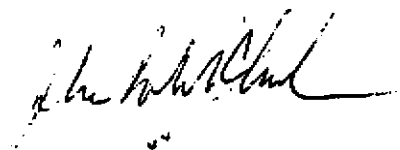
The area shown on your plots as Area "C", is located at about 8000N x 9900E. The pattern for the oxidation suite elements around that point could easily be interpreted as part of an interference pattern between the apparent oxidation cells north and south of that area. However, the pattern for the rare earth elements, Th, and U do form a halo pattern there. If it was not for the coincident IP anomaly you show in your plots, this pattern would be easy to miss. It could easily be associated with mineralized rock in the subsurface, however the levels of metals around this anomaly are not as high as the other two halos.

A number of approximate N-S and E-W linear trends for some elements (e.g. Bi, Hg, ^{Sr}Sn, and In) in the data appear to follow the structural grain you show in one of your figures. Based upon the locations of the halos, and these apparent trends, these patterns seem to be indicating structures that may have played a role in the formation of mineralized zones in the subsurface. The levels of Cu, Mo, Au, and Pd would seem to suggest a style of hydrothermal mineralization that could be associated with a porphyry stock somewhere in the vicinity.

Further Work:

I would strongly recommend further work in the areas of the northern and southern anomalies to determine the sources of the metals and the halos patterns they and many other trace elements form. Previous work that has been conducted on the area (IP, conventional soil geochemistry, biogeochemistry, and what rock sampling could be done) provide indications that one or more Cu-Mo-Au mineralized bodies are present in the subsurface. The Enhanced Enzyme LeachSM patterns found with this survey provide targets of that type that need to be tested. Drilling of these targets would be the next step, in order to confirm the composition and nature of the reduced bodies in the subsurface.

Sincerely,



J. Robert Clark, Ph.D.
General Manager

TABLE 1. Elements forming haloes

AREA "A" Anomaly

Group	Share of total elements	haloing elements
Oxidation suite	12/15	Cl, B, I, Mo, Se, V, Au, Sb, U, Th, Re, W
Metals + chalcophile assoc.	6/13	Cu, Ni, Ge, Cd, Sn, Bi
High field strength elements	2/7	Ta, Y
Rare earths	14/14	La, Pr, Ce, Sm, Nd, Ho, Gd, Dy, Er, Tm, Tb, Yb, Lu, Eu
Lithophile elements	1/8	Li
P.G.E.	0/4	

AREA "B" Anomaly

Oxidation suite	9/15	Cl, Br, I, Se, V, Mo, Re, Th, U
Metals + chalcophile assoc.	4/13	Cu, Ni, Ge, Cd,
High field strength	4/7	Ta, Y, Zr, Ta, Y, Nb.
Rare earths	14/14	La, Pr, Ce, Sm, Nd, Ho, Gd, Dy, Er, Tm, Tb, Yb, Lu, Eu
Lithophile elements	2/8	Li, Be
P.G.E.	0/4	

AREA "C" Anomaly

Oxidation suite	10/15	Cl, Br, I, Se, V, Mo, Re, U, Th, W
Metals + chalcophile assoc.	4/13	Cu, Ni, Ge, Cd,
High field strength	5/7	Ta, Y, Zr, Hf, Nb
Rare earths	14/14	La, Pr, Ce, Sm, Nd, Ho, Gd, Dy, Er, Tm, Tb, Yb, Lu, Eu
Lithophile elements	2/8	Be, Li
P.G.E.	0/4	

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B.C. Assessment Report file.
- Clark, J.R., 1995 A.L. Meier and G. Riddle, 1990, Enzyme leaching of surficial
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20 pp
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1998. Surface geochemical patterns derived from selective leaching
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Sask. Geo. Society, Special Publication No. 13, p. 254-265
- Jackisch, Ingo 1992 Assessment Report on IP/Resistivity Survey
Wyse-Rabbit Property , Assessment Report 22,531
- Monger, J.W.H., McMillan, W.J. 1989: Geology of Ashcroft Map area
G.S.C. Map 42-1989 1:250,000
- Pearson, K, Wong, T. 1990 Report on Prospecting, Geochemistry and Geophysics on the
Rabbit Claims Assessment Report 21,125

STATEMENT OF QUALIFICATIONS

I certify that:

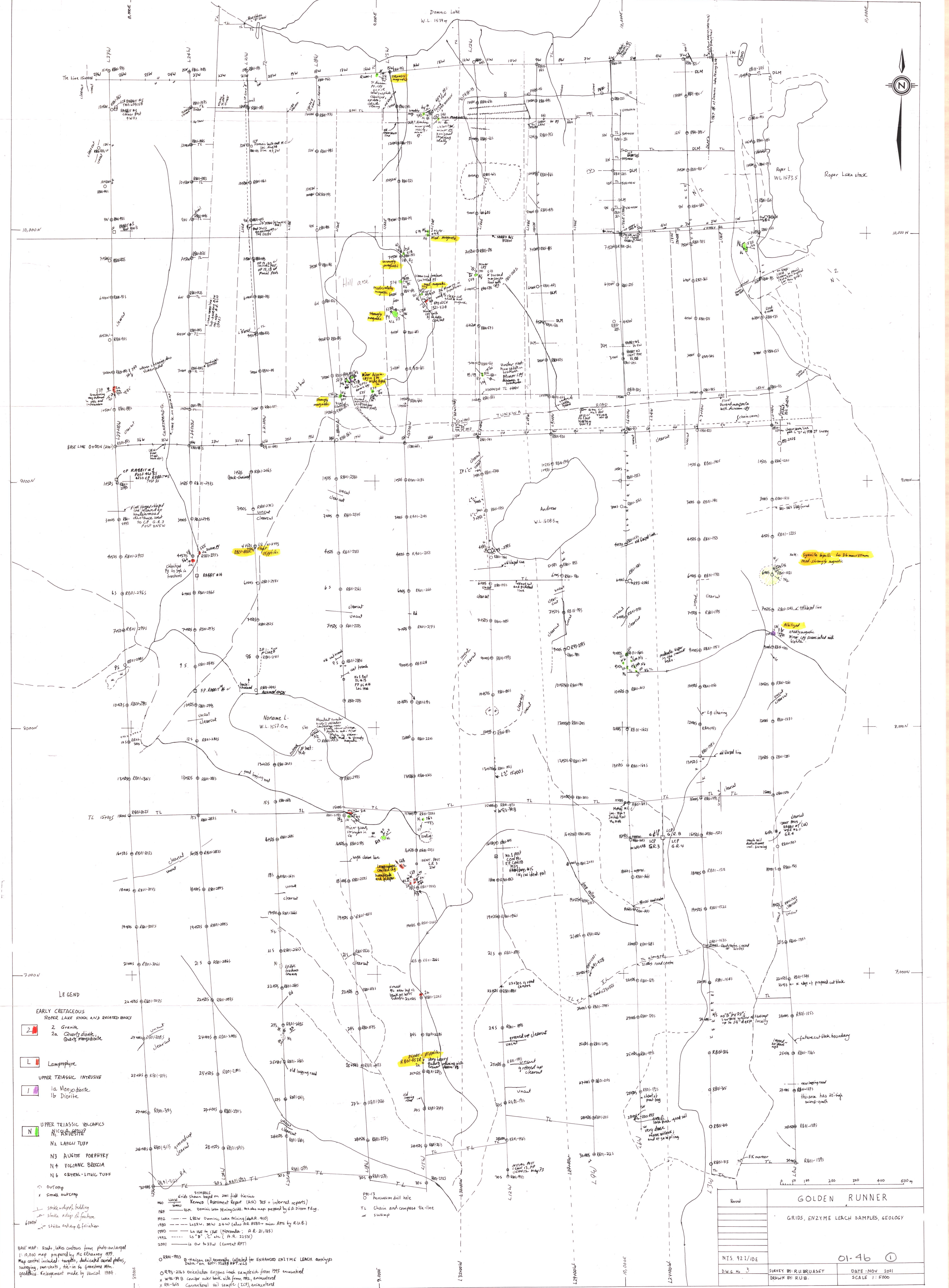
1. I am a 1967 graduate of the University of British Columbia with a B. Sc. Degree in Science. I have practiced my profession since graduation.
2. I have conducted field work in the Dominic Lake area during the years: 1969, 1970, 1975, 1978-81, 1989-2001. Field work has consisted of: soil sampling, bark sampling, mapping, percussion and diamond drill supervision, core logging, compilation work and Enzyme Leach sampling.
3. I have completed three Enzyme Leach grid surveys prior to the present survey
4. I carried out the mapping and sampling herein described.


Ragnar U. Bruaset, B.Sc.
January 29, 2002

APPENDIX A

ENHANCED ENZYME LEACH DATA PLOTS

MAPS 14-69



LEGEND

EARLY CRETACEOUS
ROPER LAKE STOCK AND RELATED ROCKS

- 2 Granite
- 2a Quartz diorite, Quartz monzonite

L Lamprophyre

UPPER TRIASSIC INTRUSIVE

- 1a Monzonite
- 1b Diorite

UPPER TRIASSIC VOLCANICS

- N1 Basaltic andesite
- N2 Lapilli tuff
- N3 Rutite porphyry
- N4 Volcanic breccia
- N6 Crystalline tuff

SYMBOLS

- Outcrop
- × Small outcrop
- Strike-slip fault
- Sink, ridge or fracture
- Strike-slip fault

GRID SYSTEM

Grids shown based on 2001 field tie-ins

1960 — Kenna (Assessment Report (AR) 325 + internal reports)

1961 — D.M. Dominik Lake Mining Co. Records map prepared by G.A. Brown P.E.G.

1972 — L.R.W. Dominik Lake Mining (d.p.a.R. 410)

1980 — L.R.W. 2001 (also AR 8580 + mine R.P.S. by R.U.B.)

1990 — L.R.W. 1306 (Noranda) A.R. 21,125

1992 — L.R.W. 1306 (A.R. 22,551)

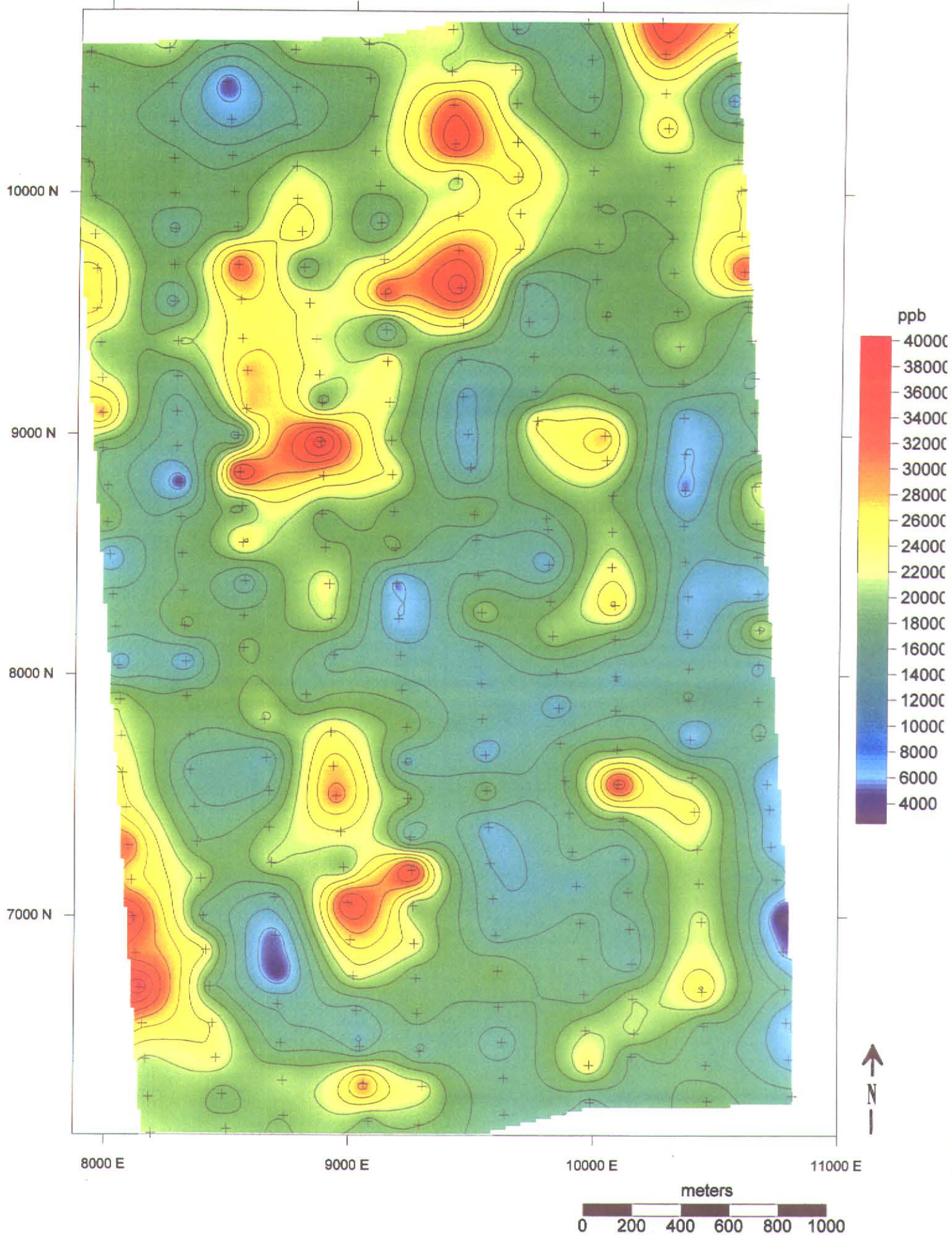
2001 — L.R.W. 1306 (Current R.P.T.)

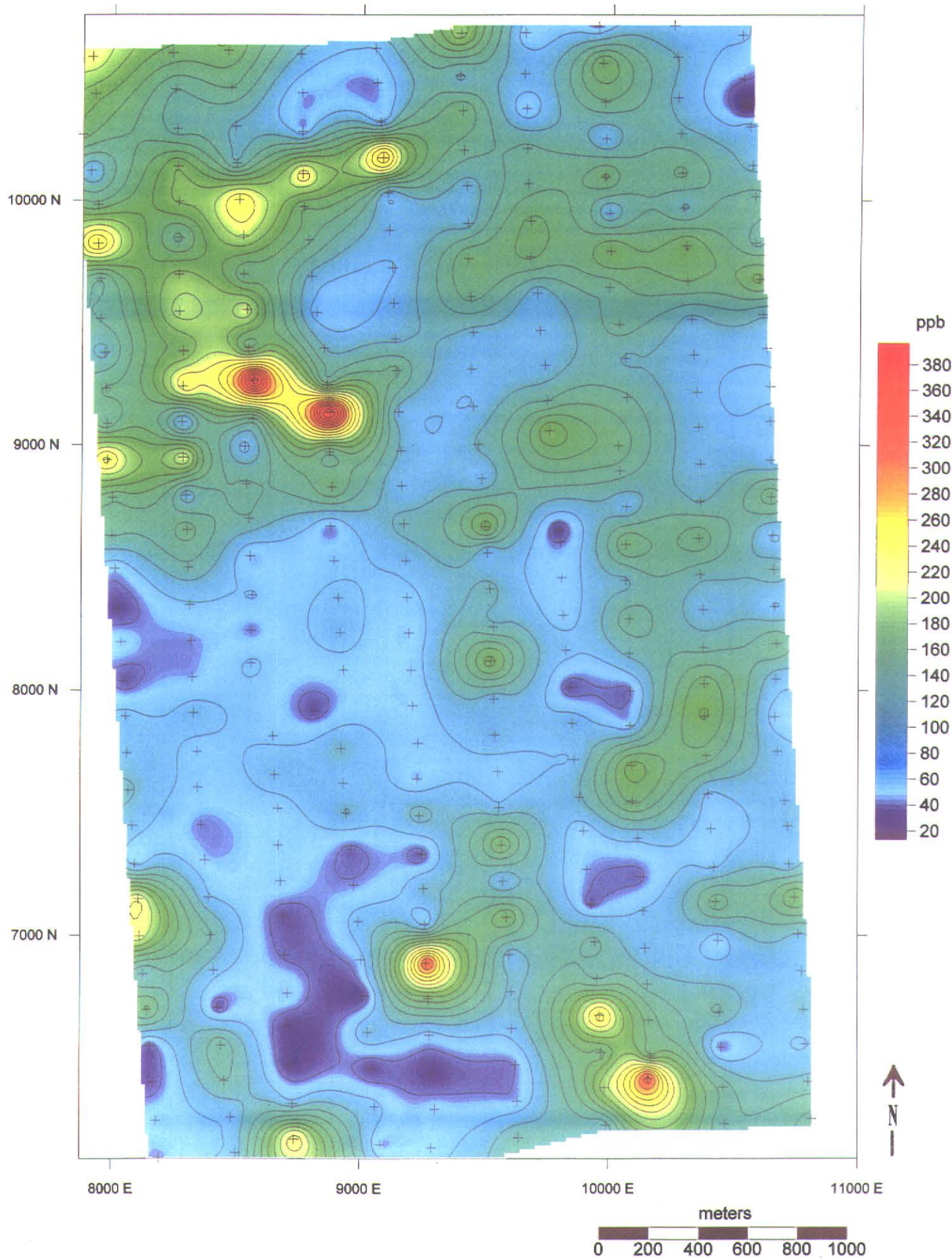
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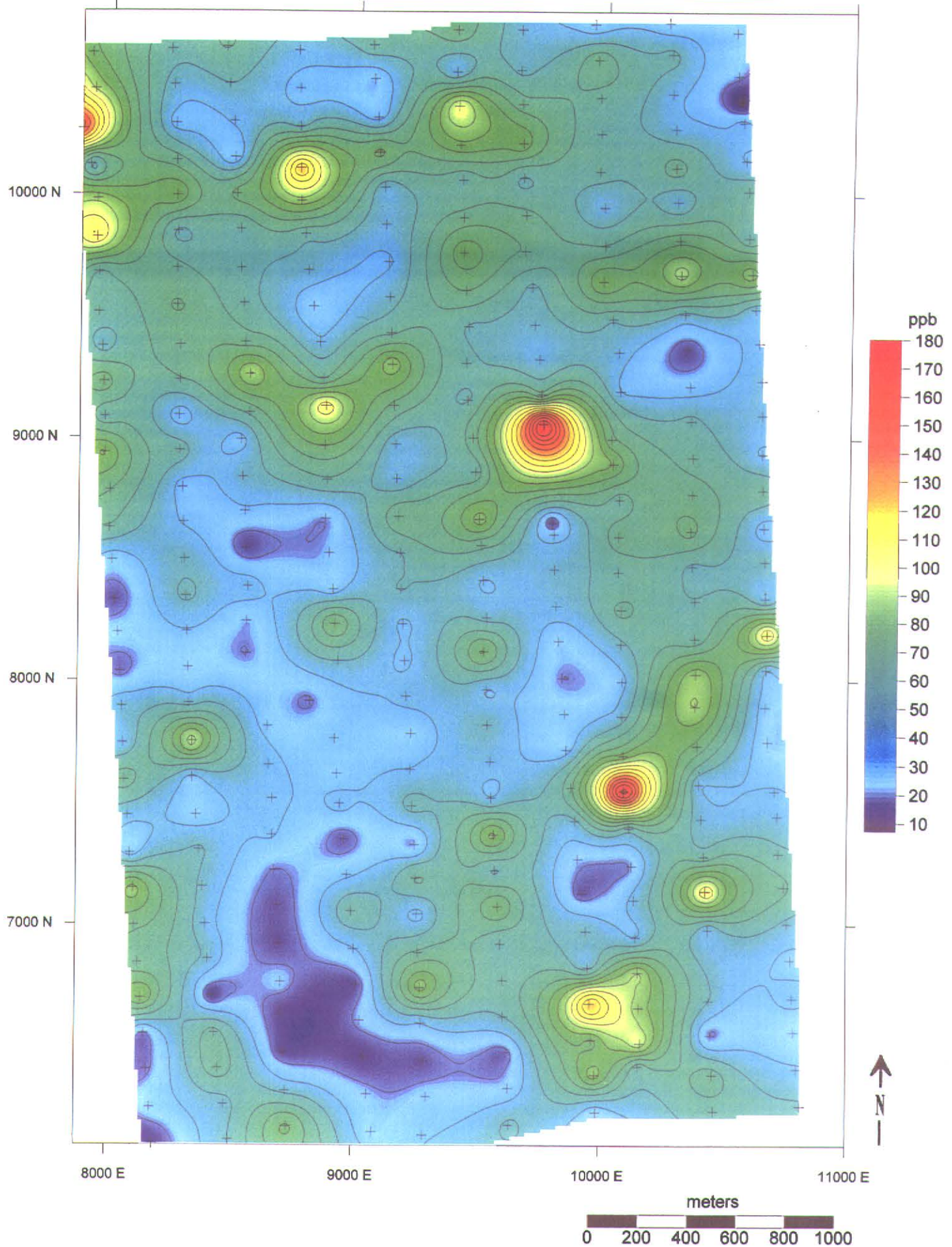
- Percussion drill hole
- TL Chain and compass tie-line
- Swamp

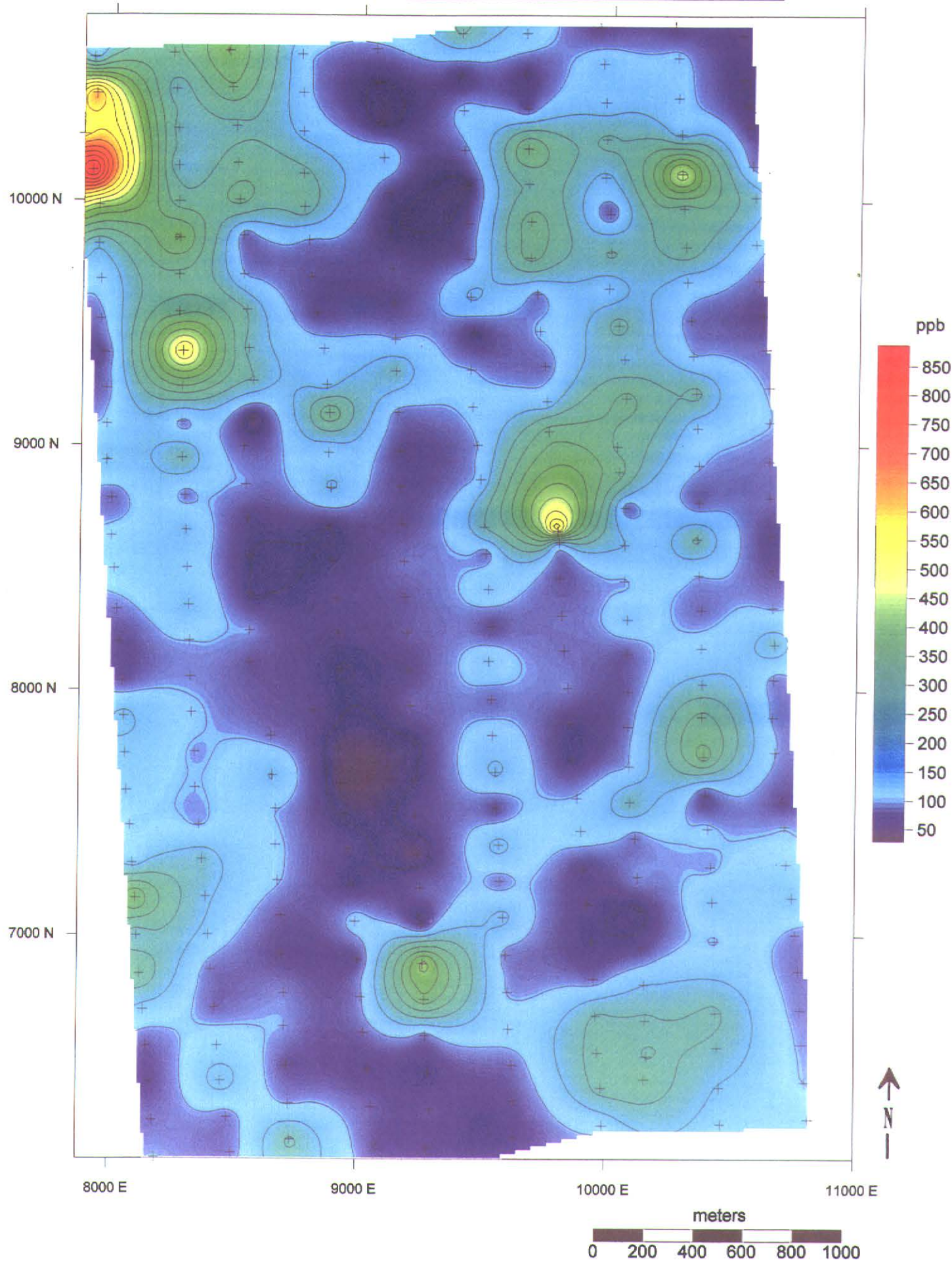
BASE MAP: Roads, lakes contours from photo-enlarged 1:10,000 map prepared by McElhenny 1979. Map control included: targets, dedicated aerial photos, surveying, run-shots, tie-in to Geomatics Mtn. geodetic. Enlargement made by Jancal 1984.

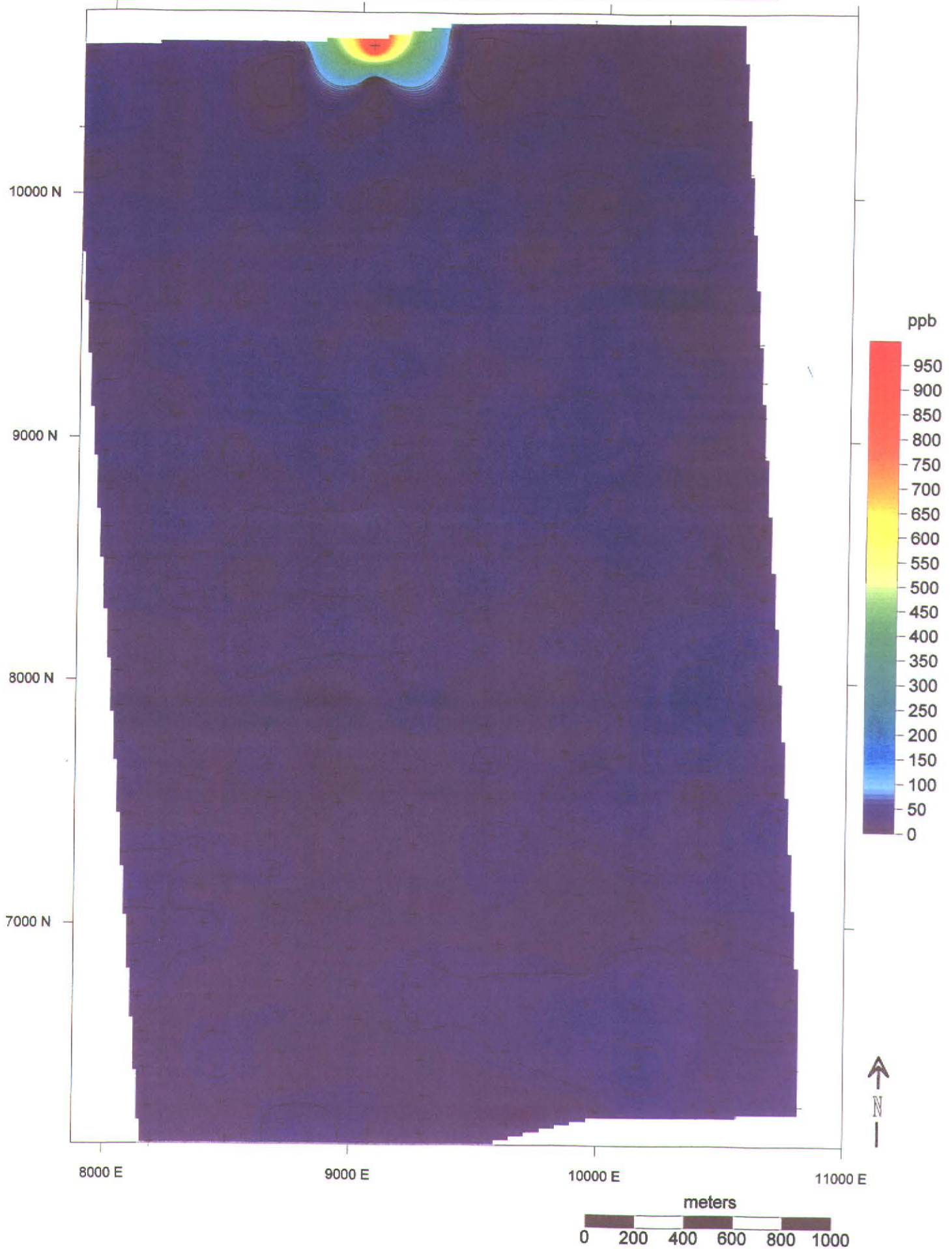
GOLDEN RUNNER			
GRIDS, ENZYME LEACH SAMPLES, GEOLOGY			
Revised			
NTS 921/10E			
DWG No. 3			
SURVEY BY: R. BRUASSET		DATE: NOV. 2001	
DRAWN BY: R.U.B.		SCALE: 1:5000	

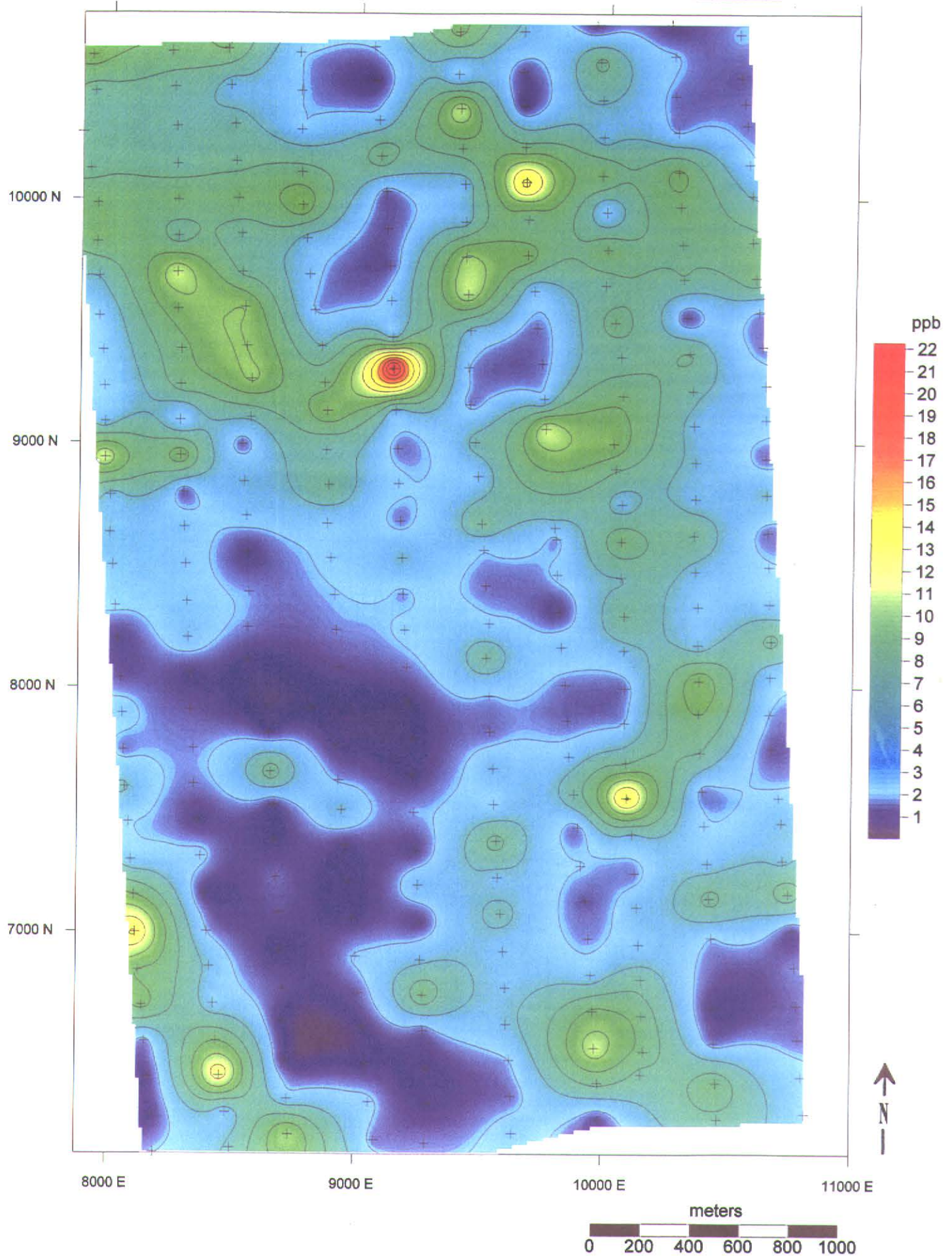


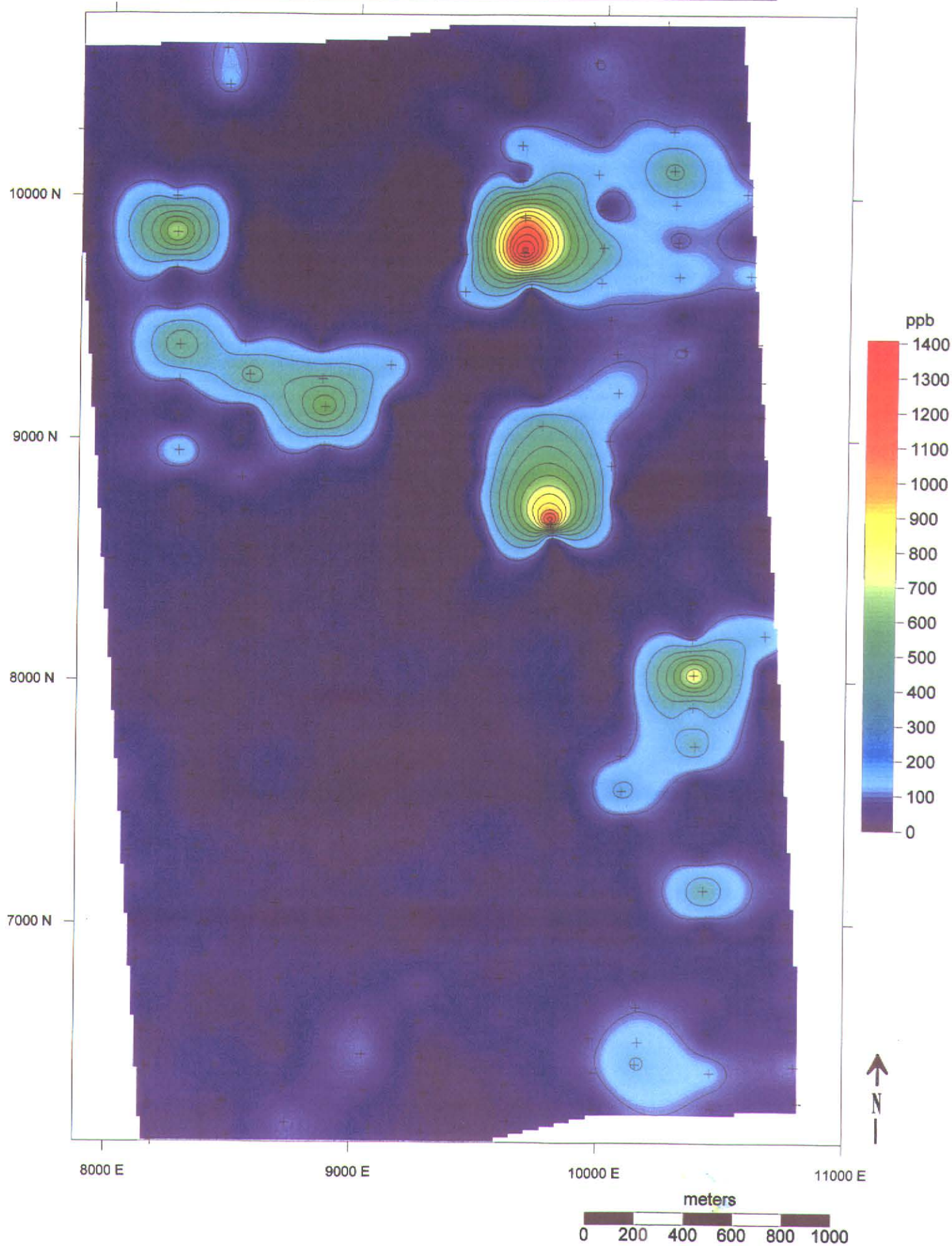


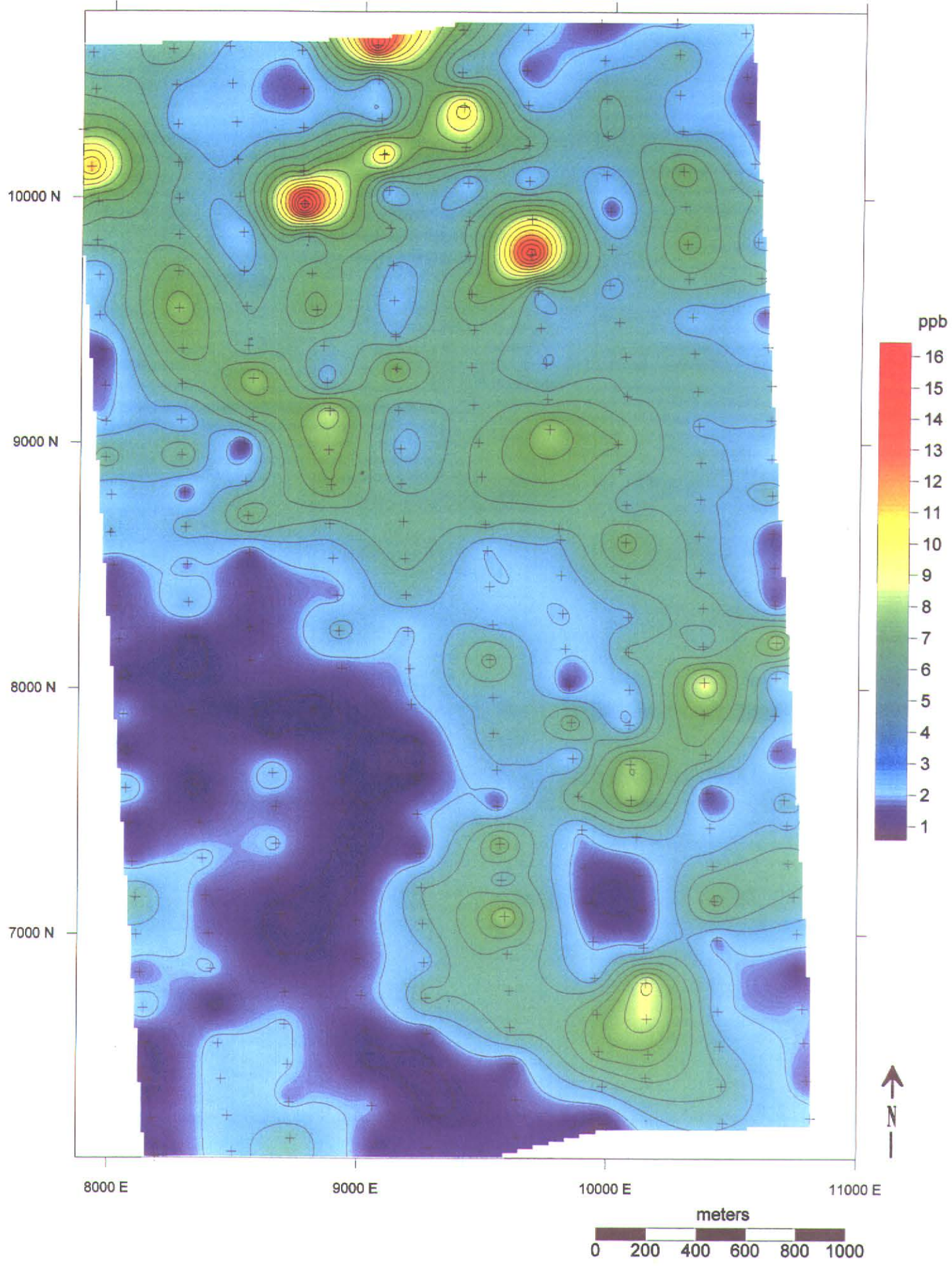


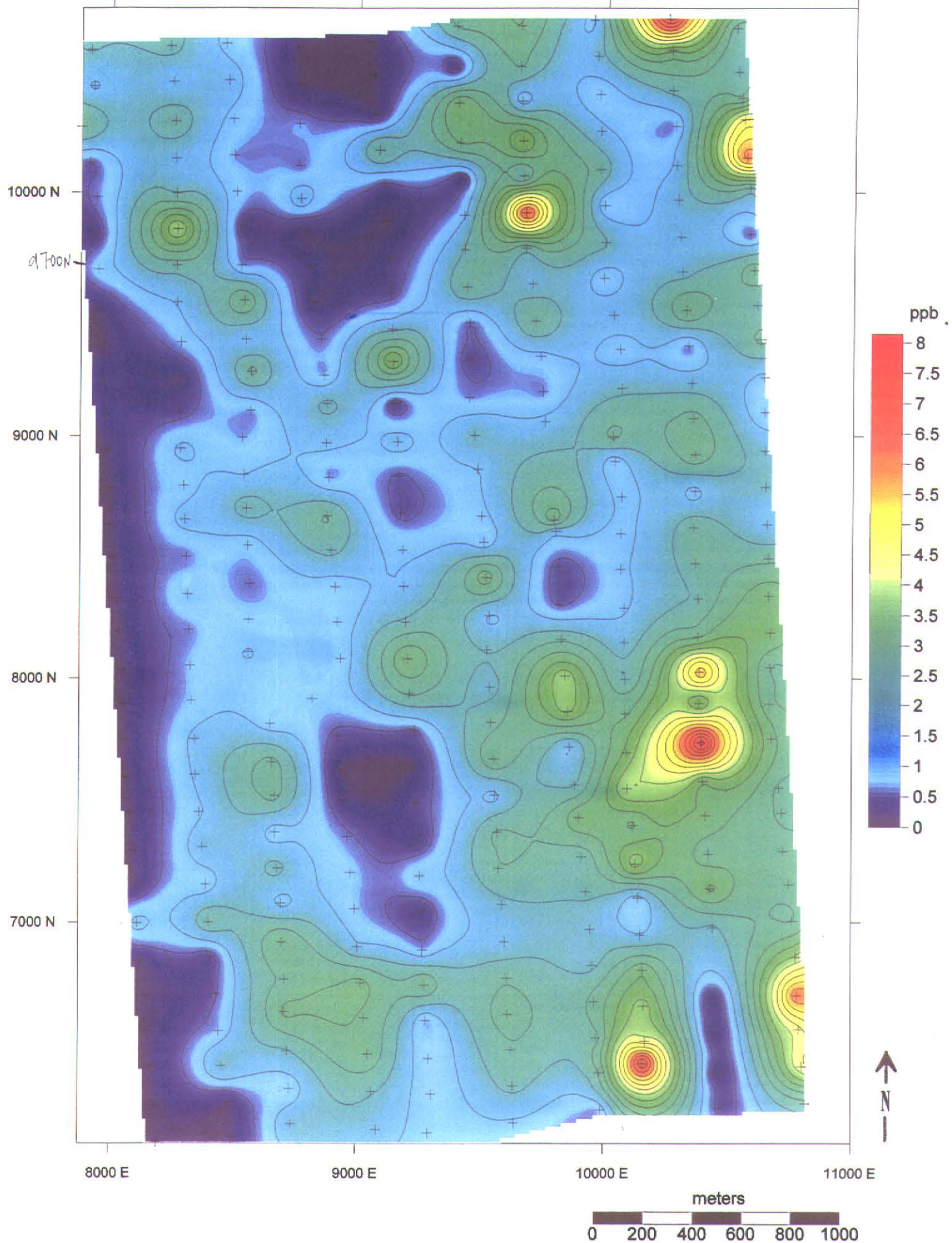


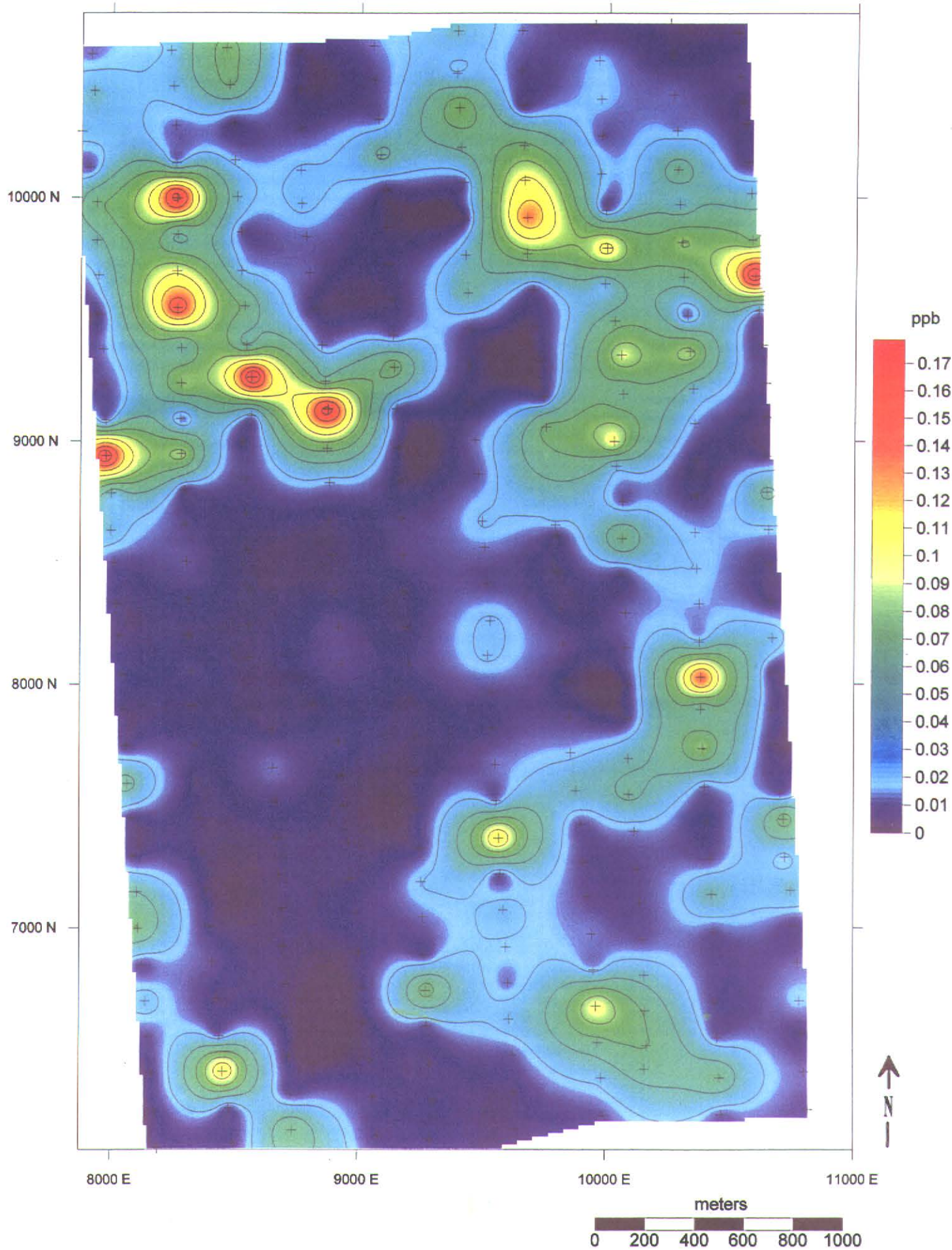


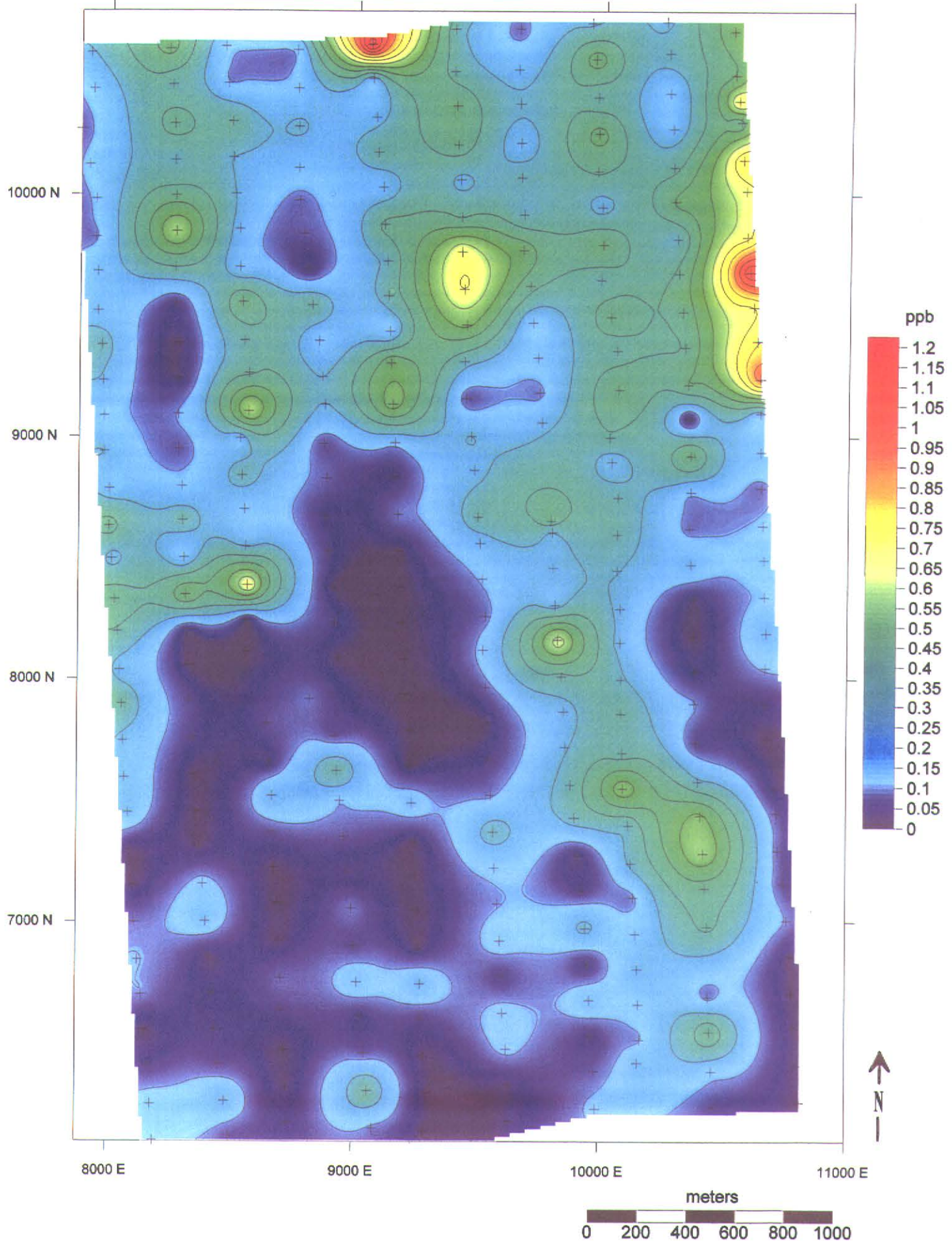


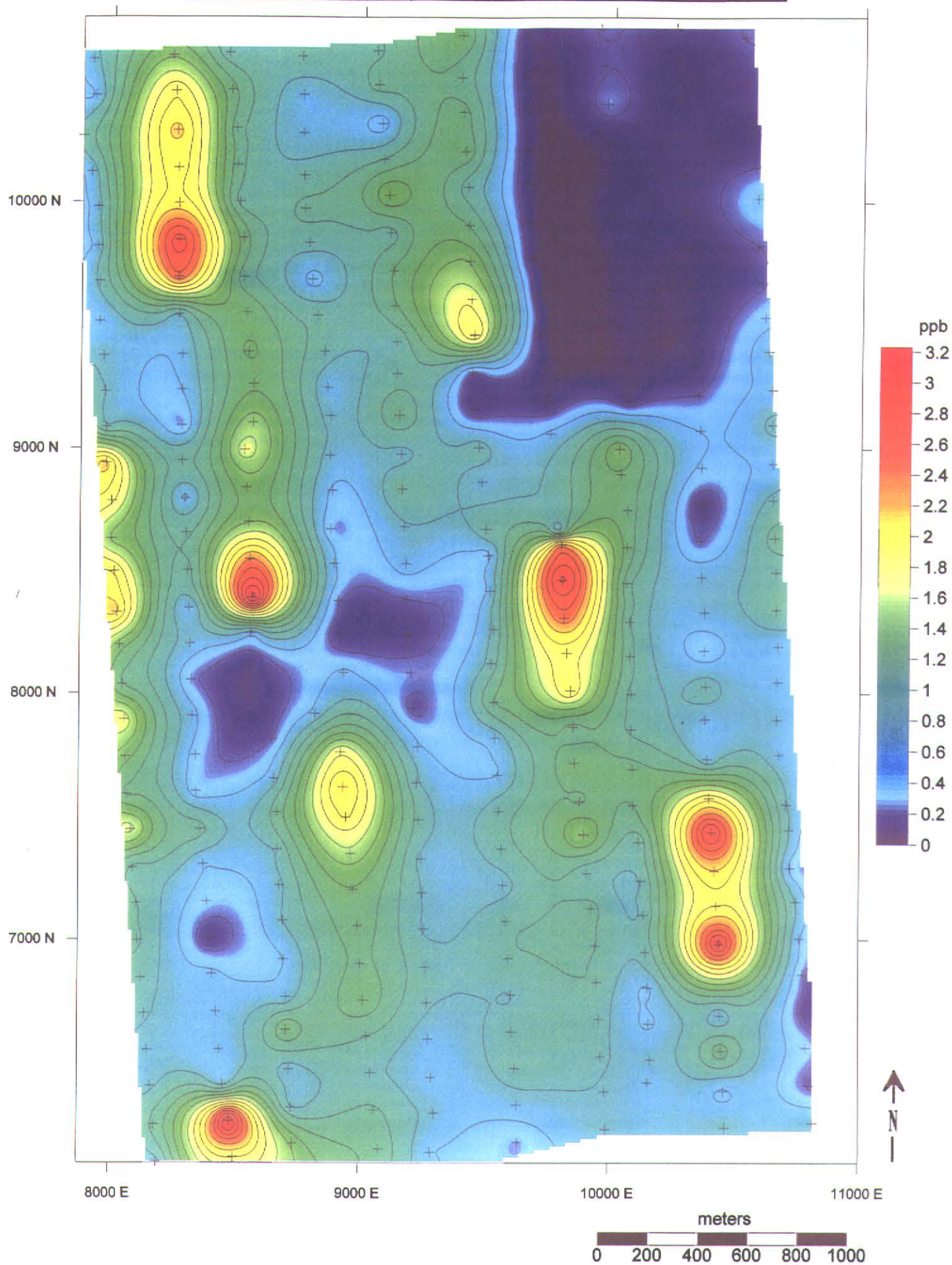


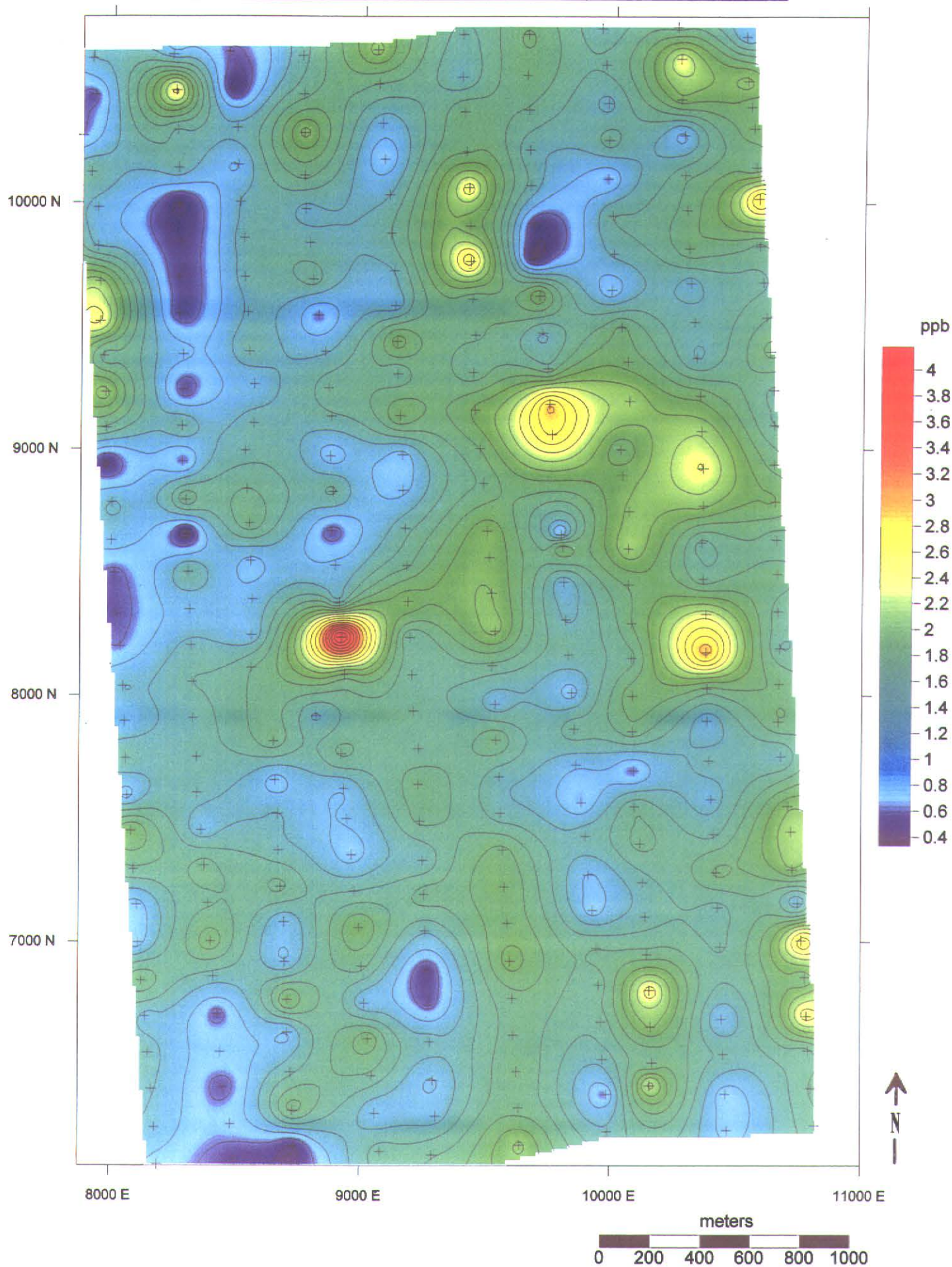


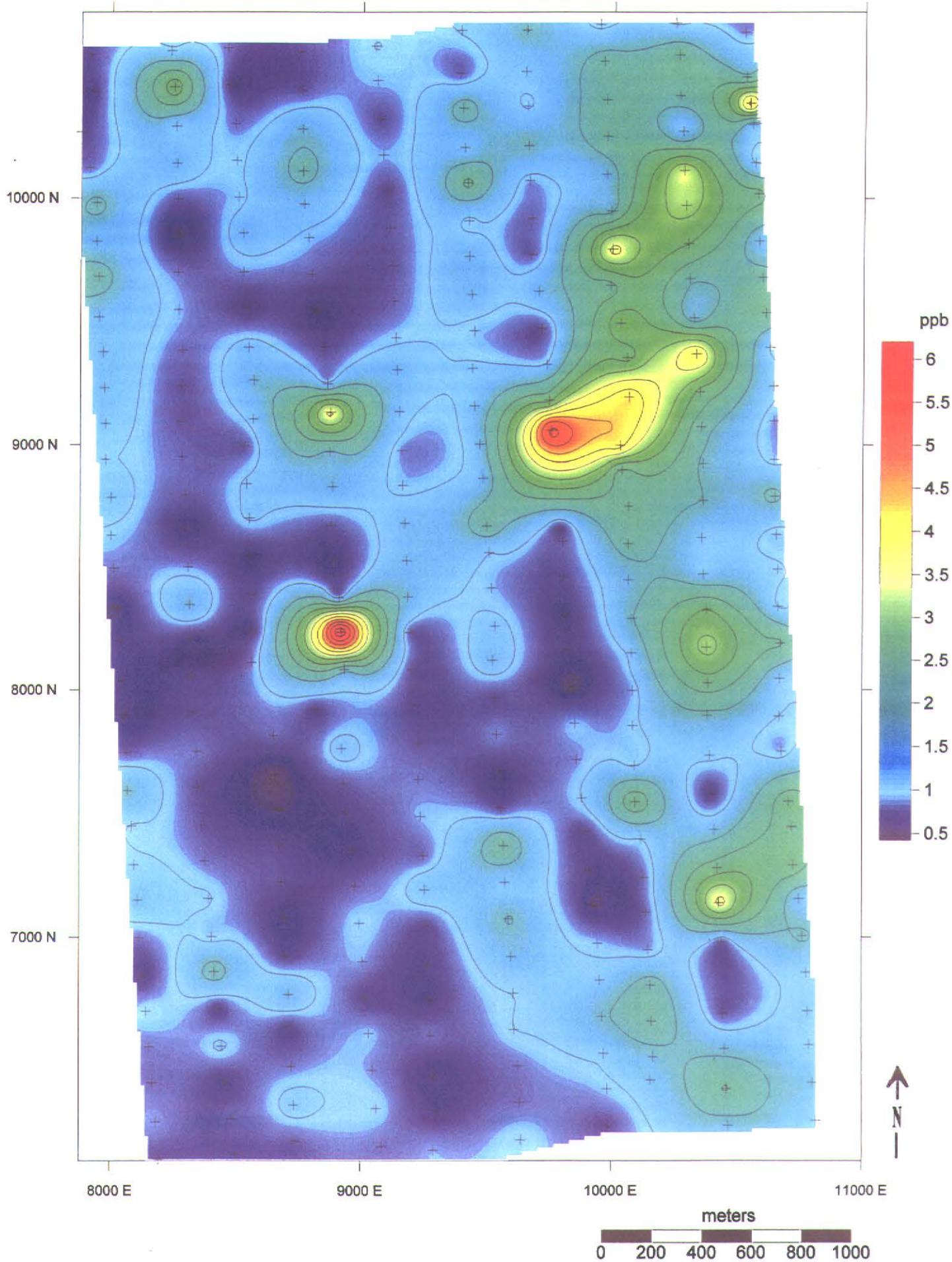








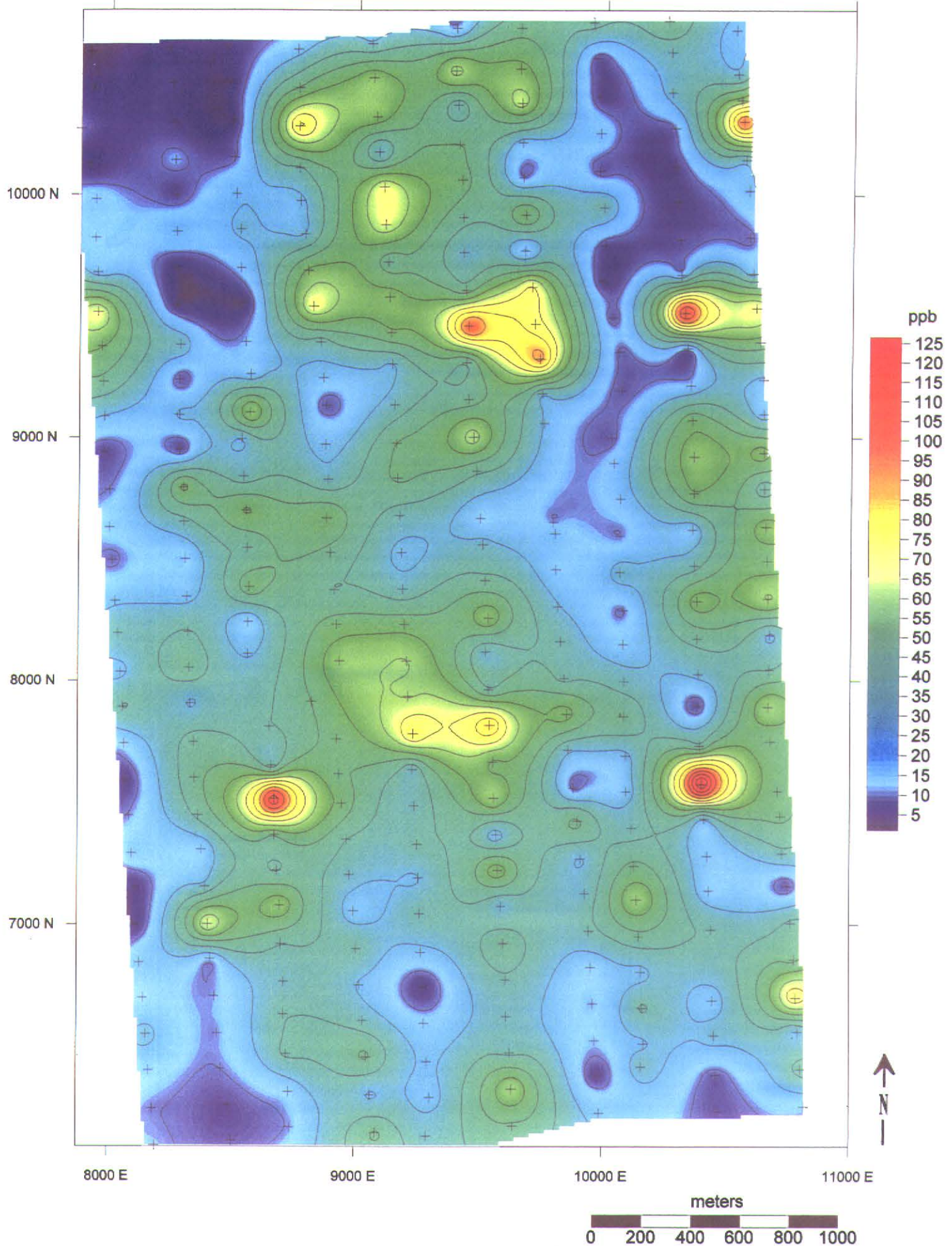


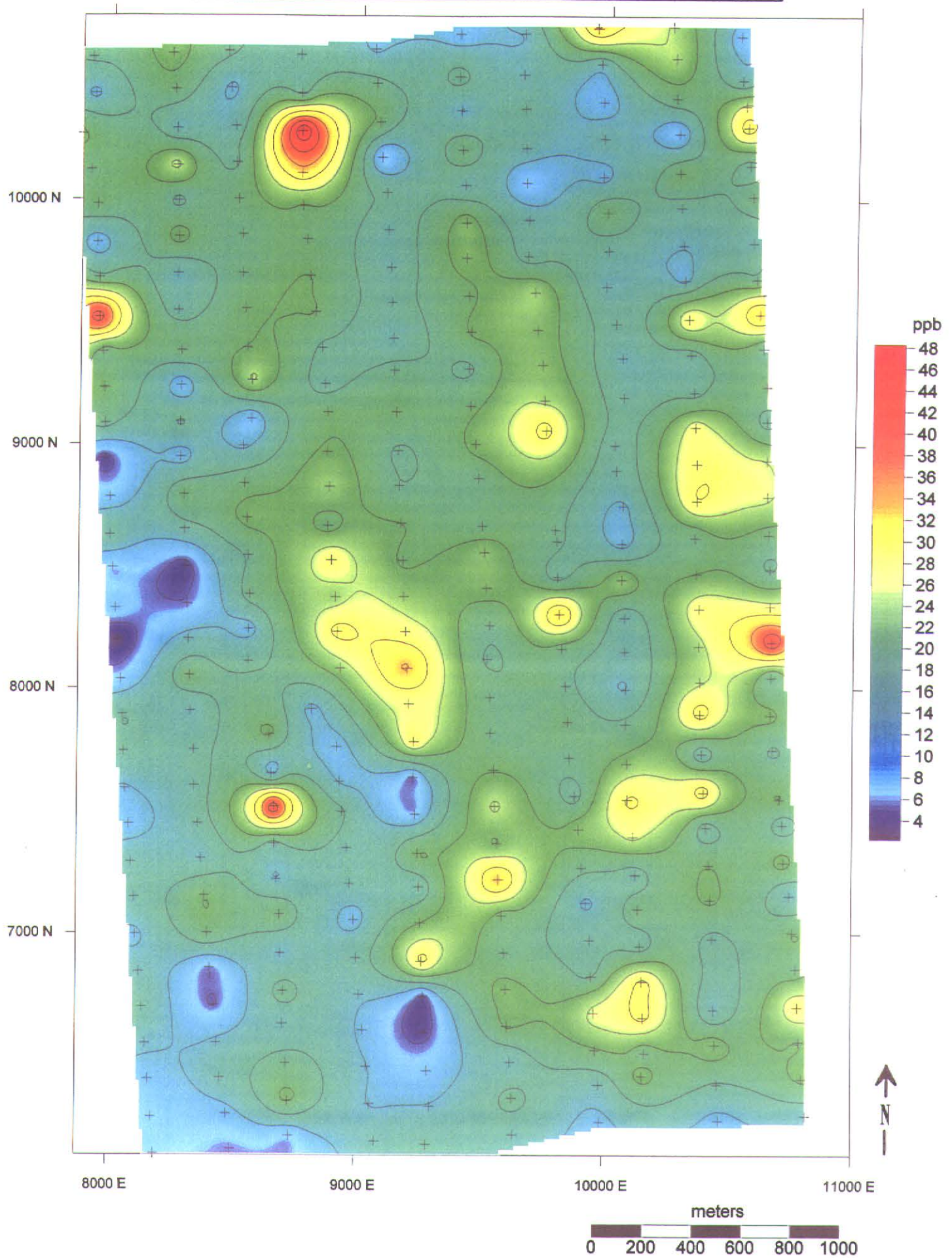


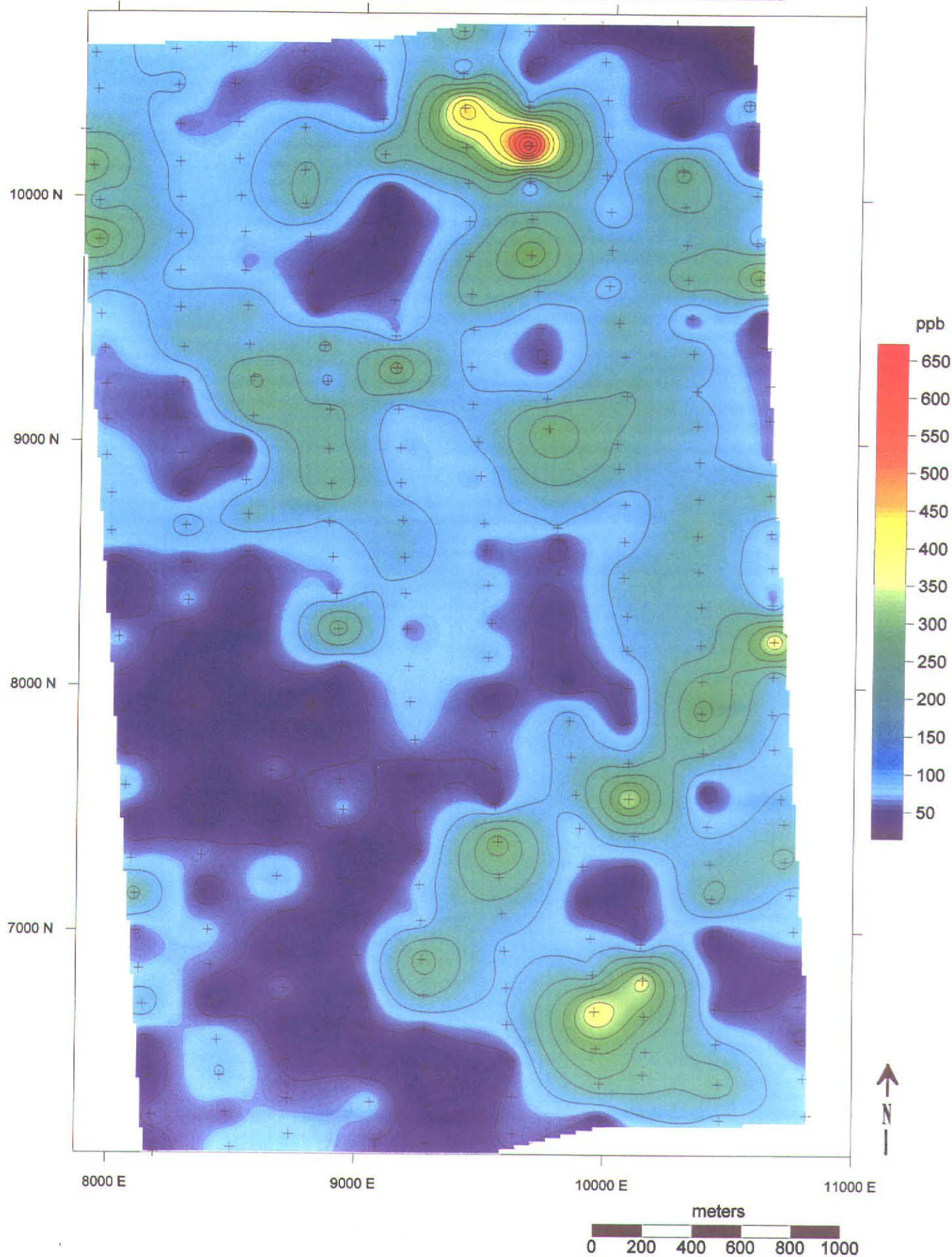
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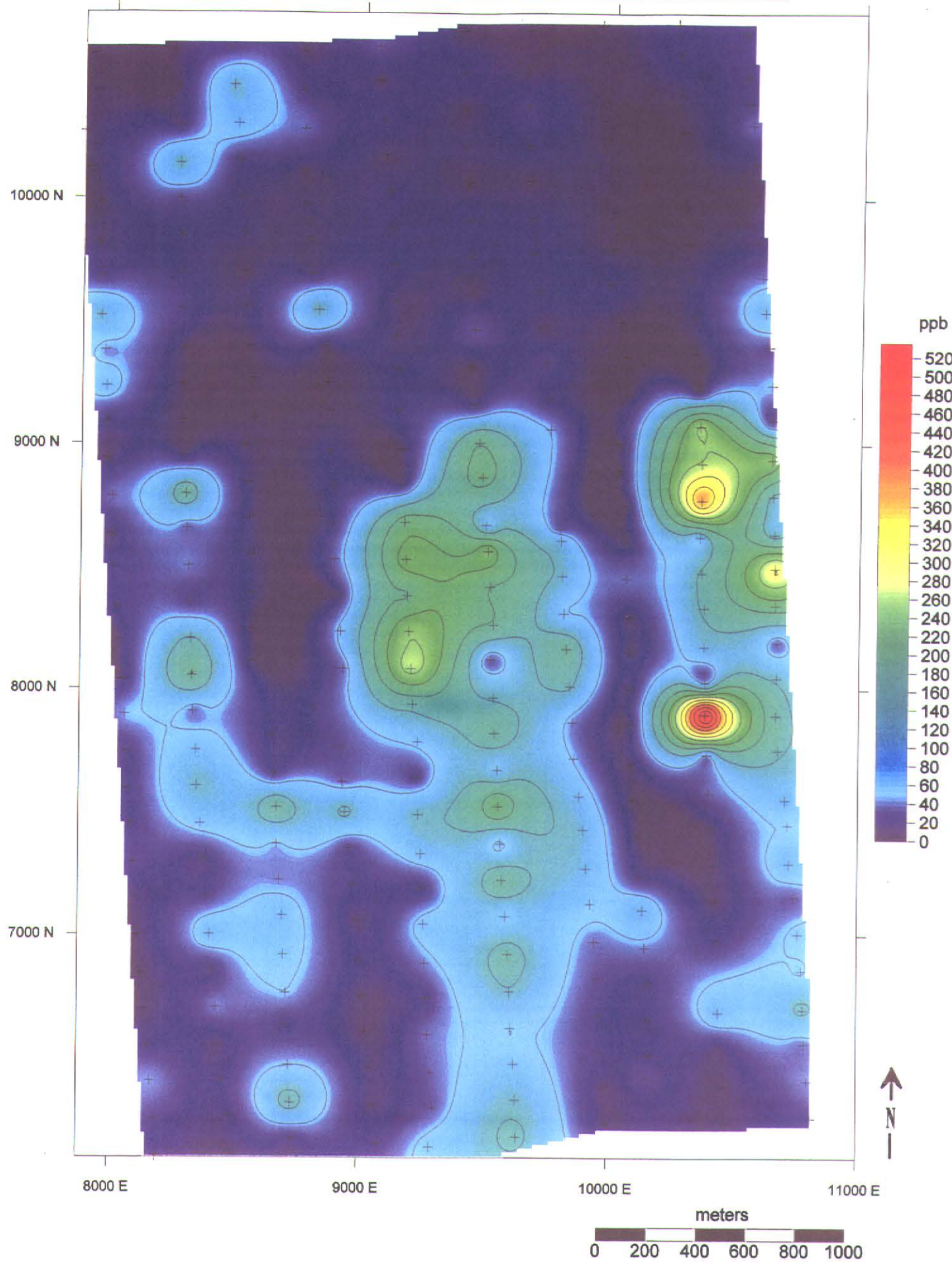
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28



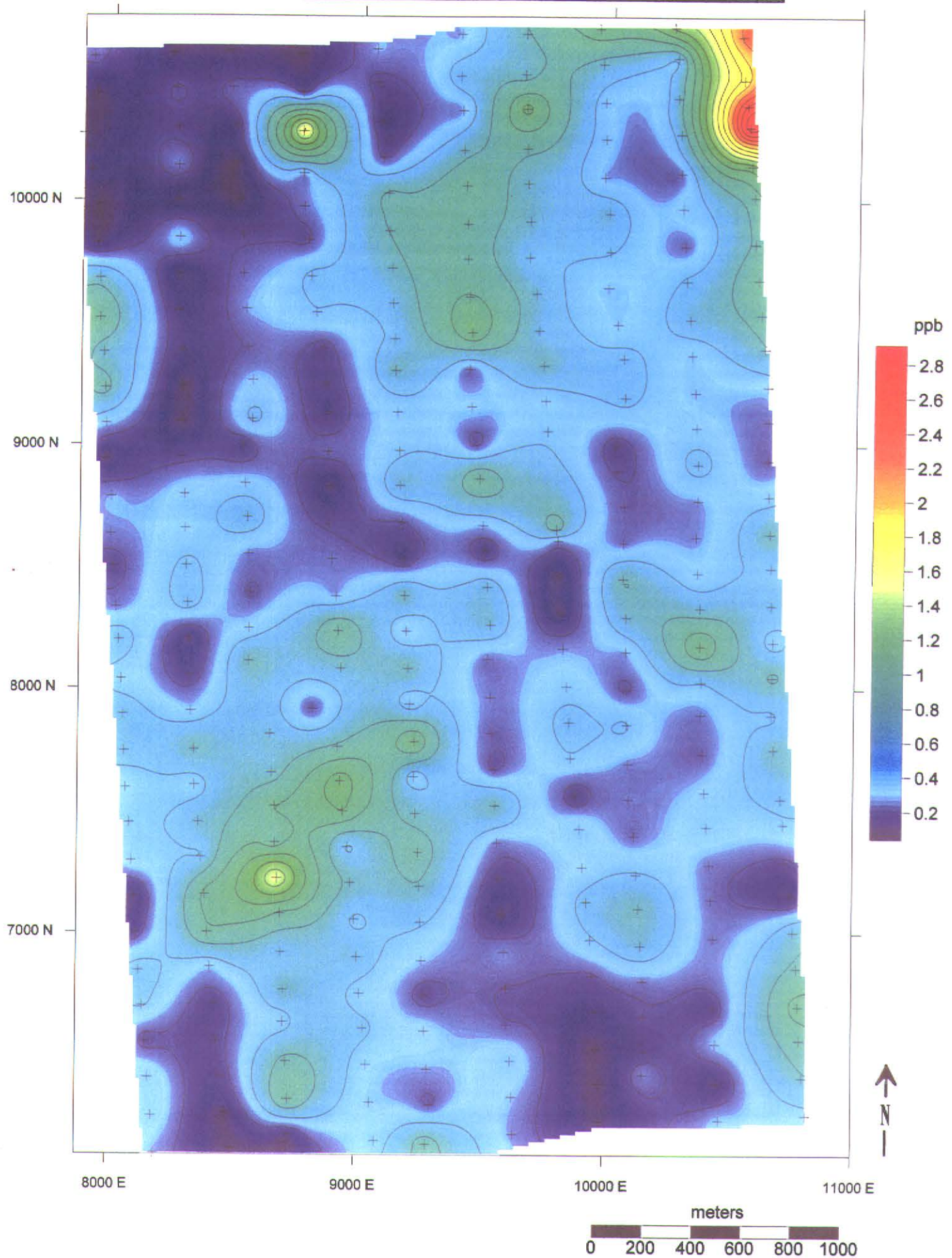






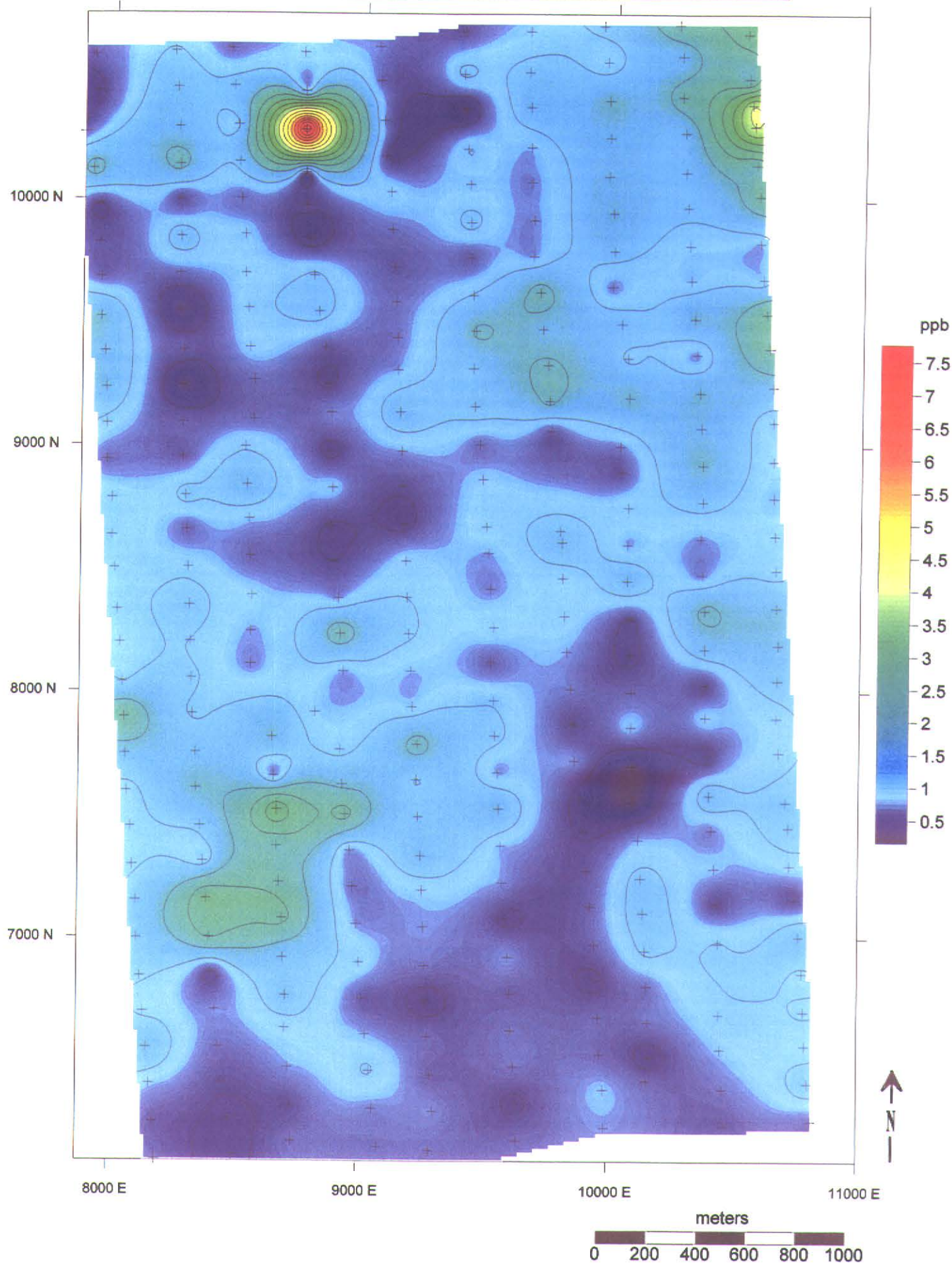
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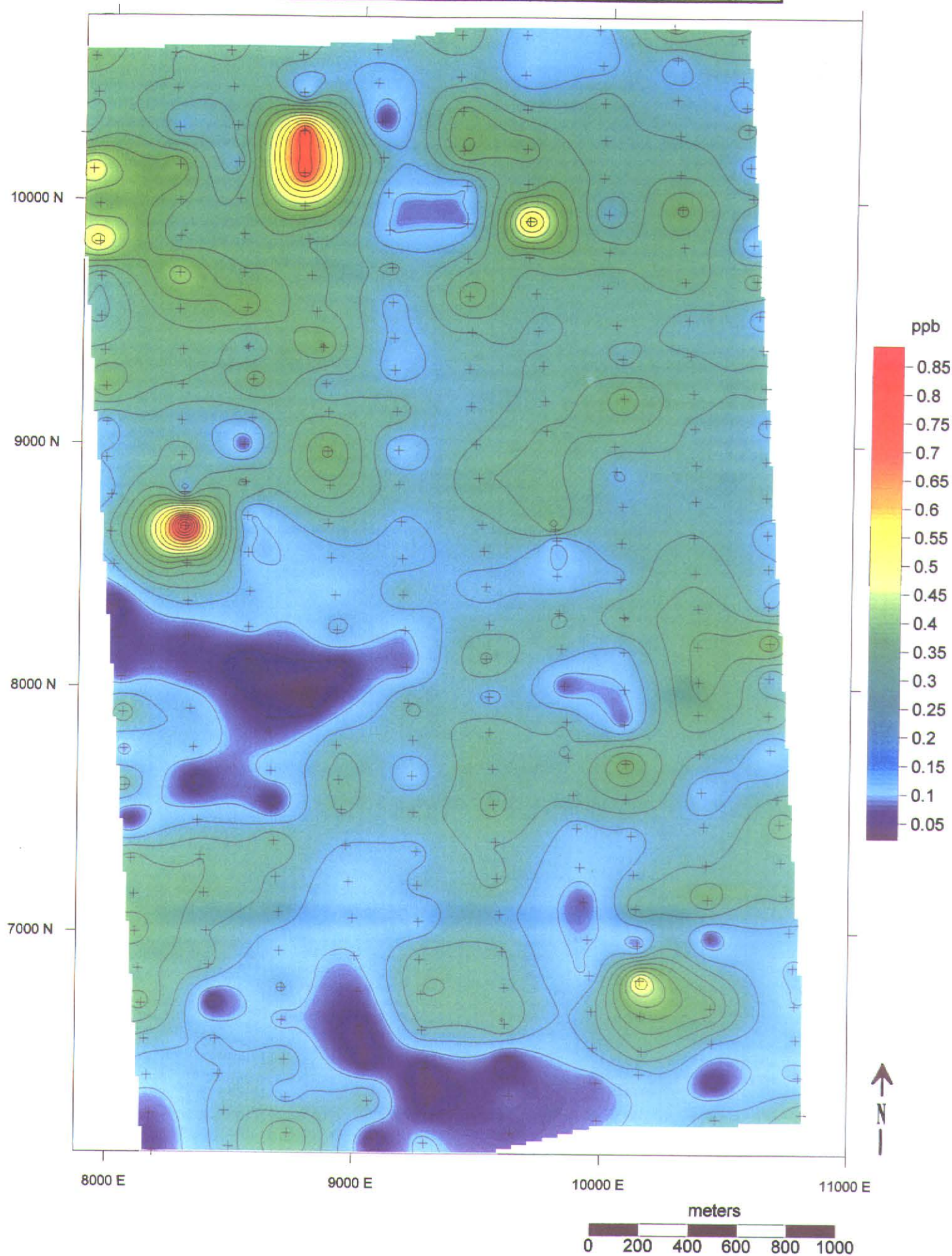
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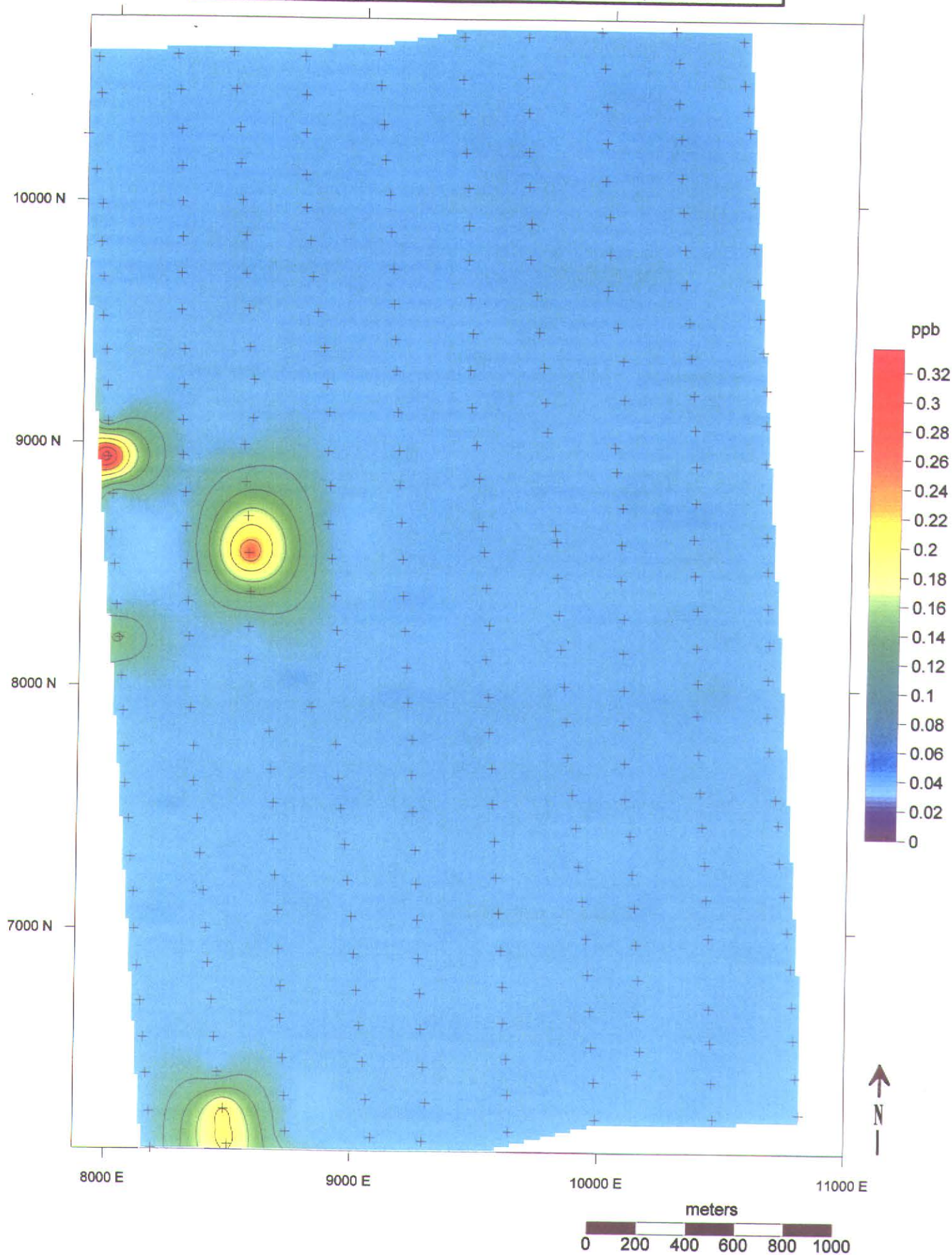
Element: Gallium
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Date: 21 September 2001

34

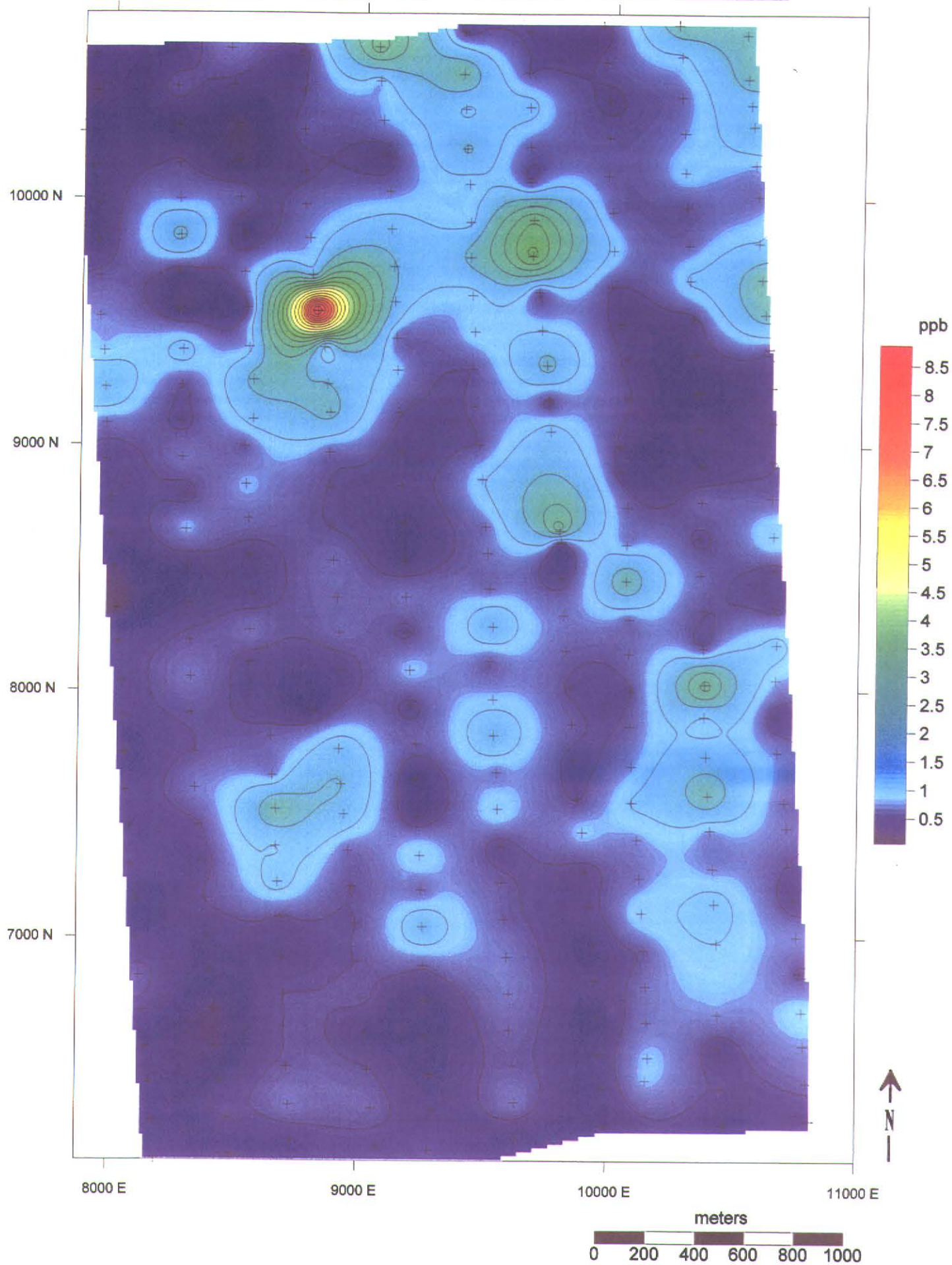


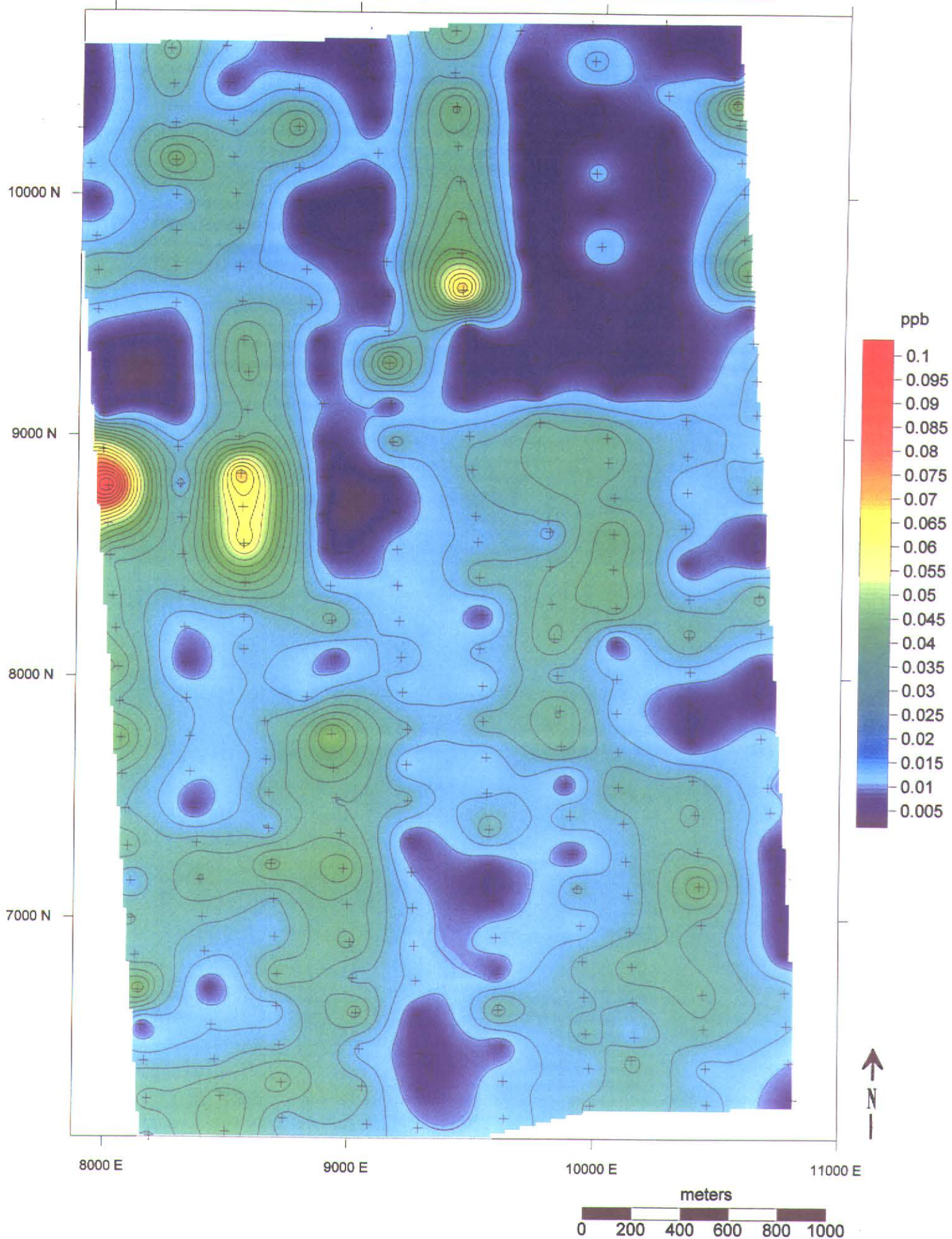


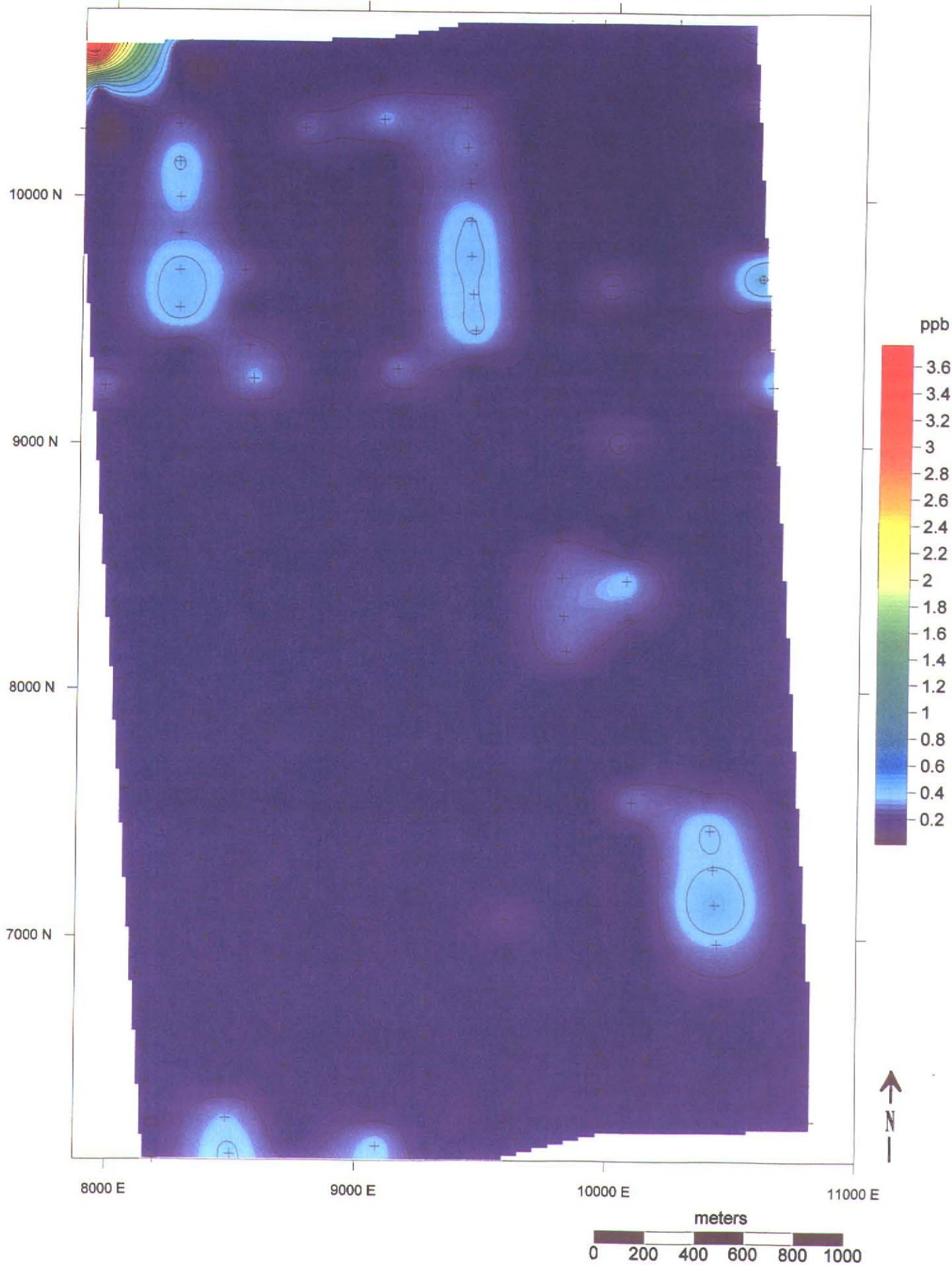
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Element: Cadmium
Date: 21 September 2001

3.6



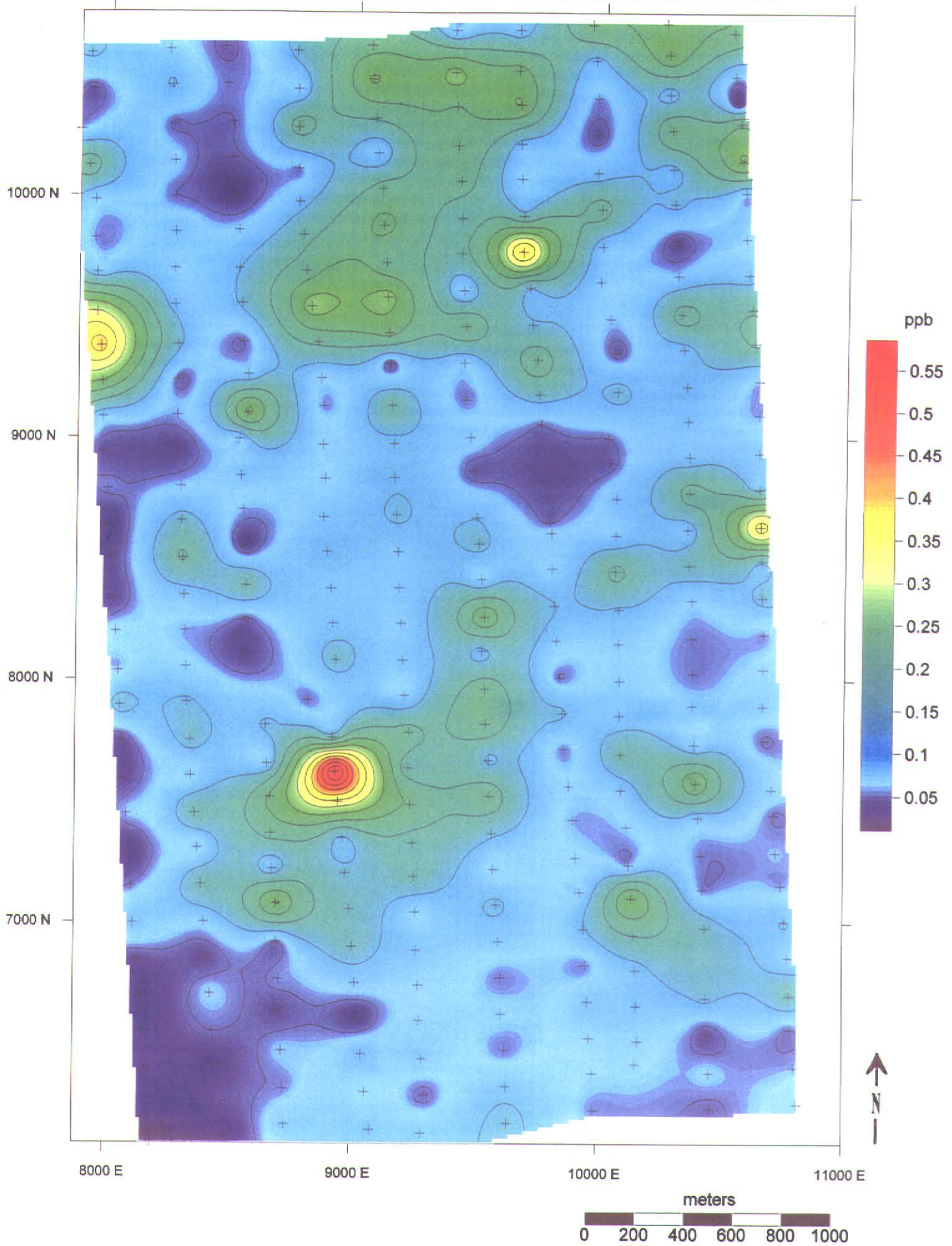




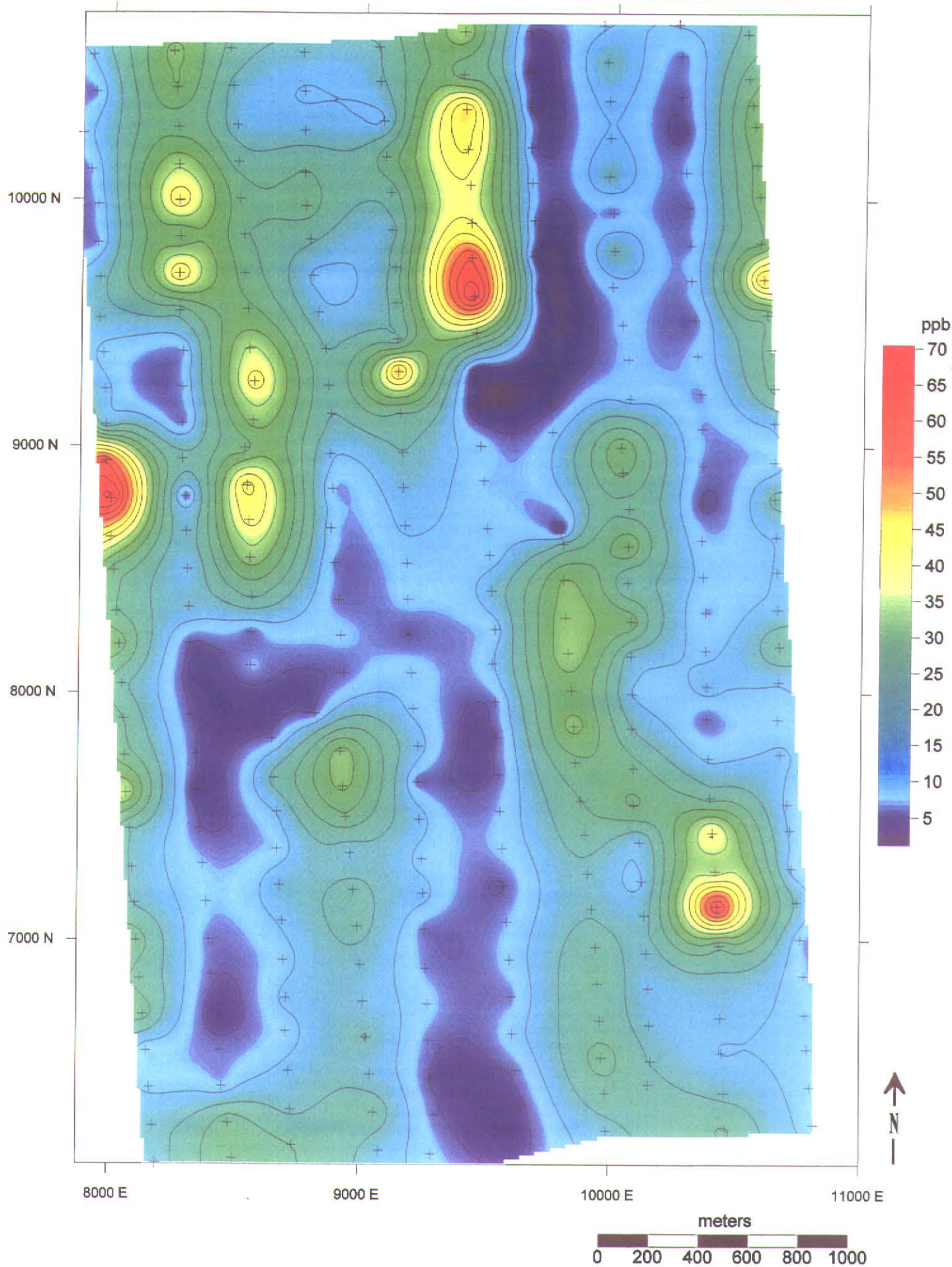
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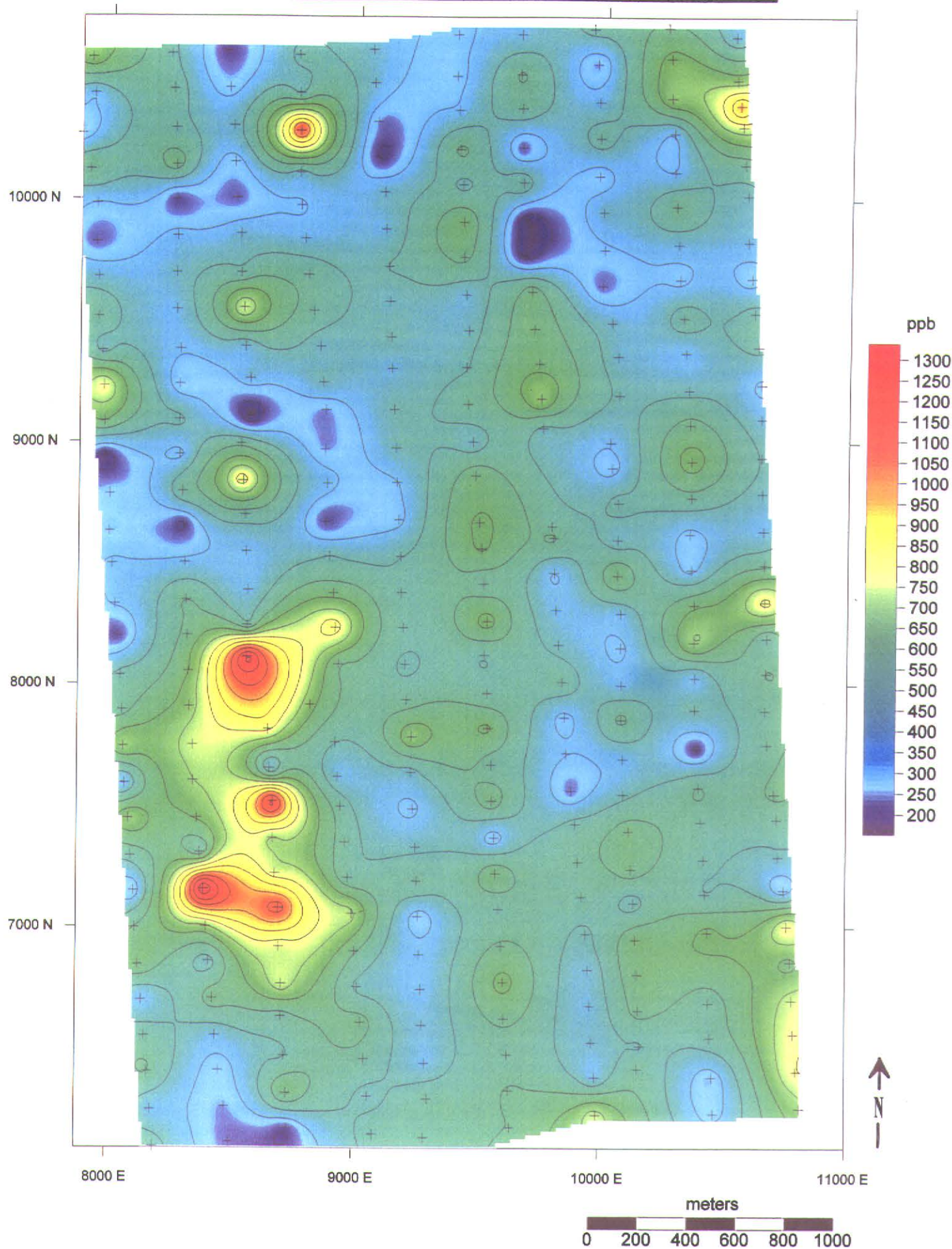
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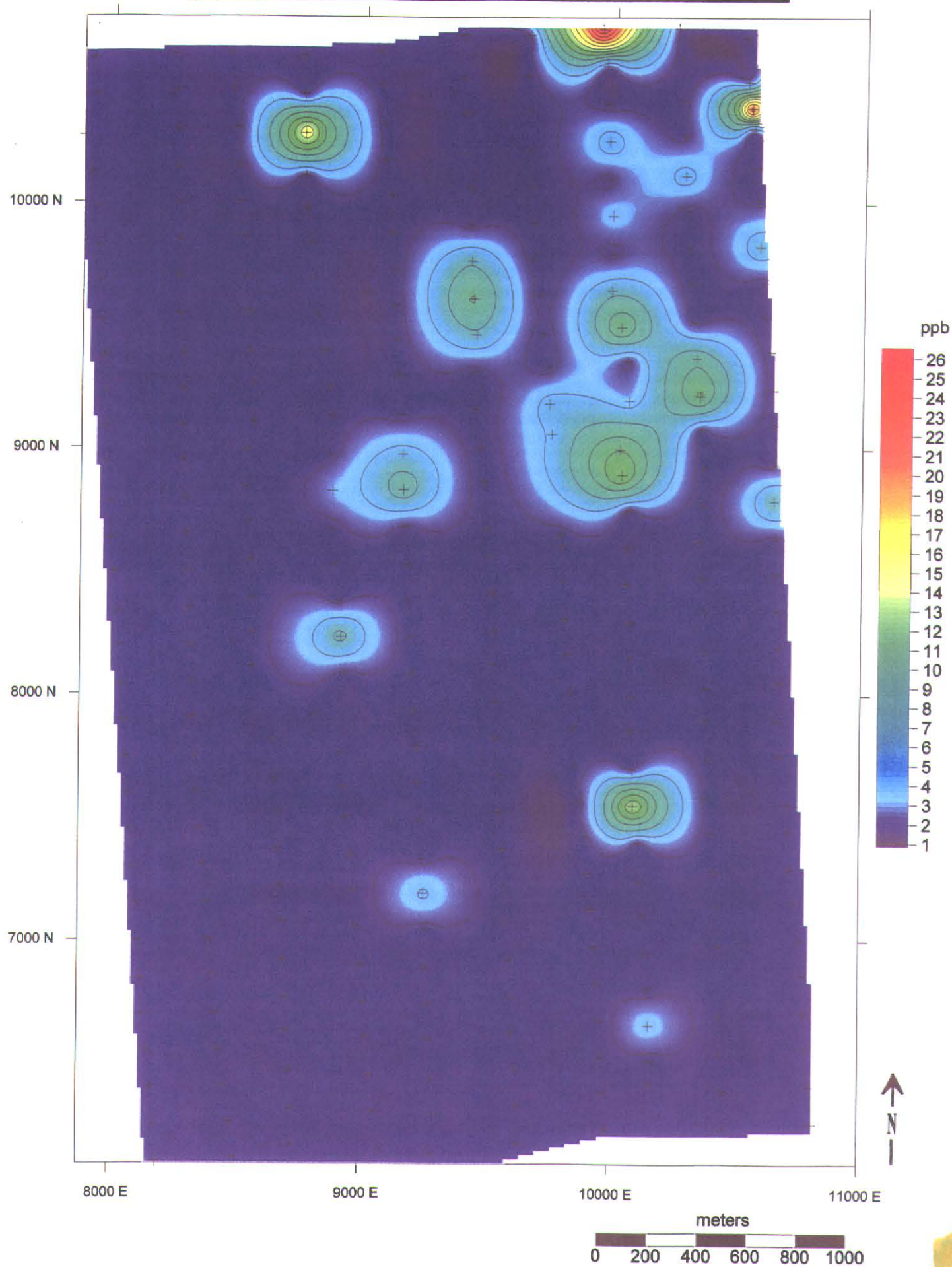
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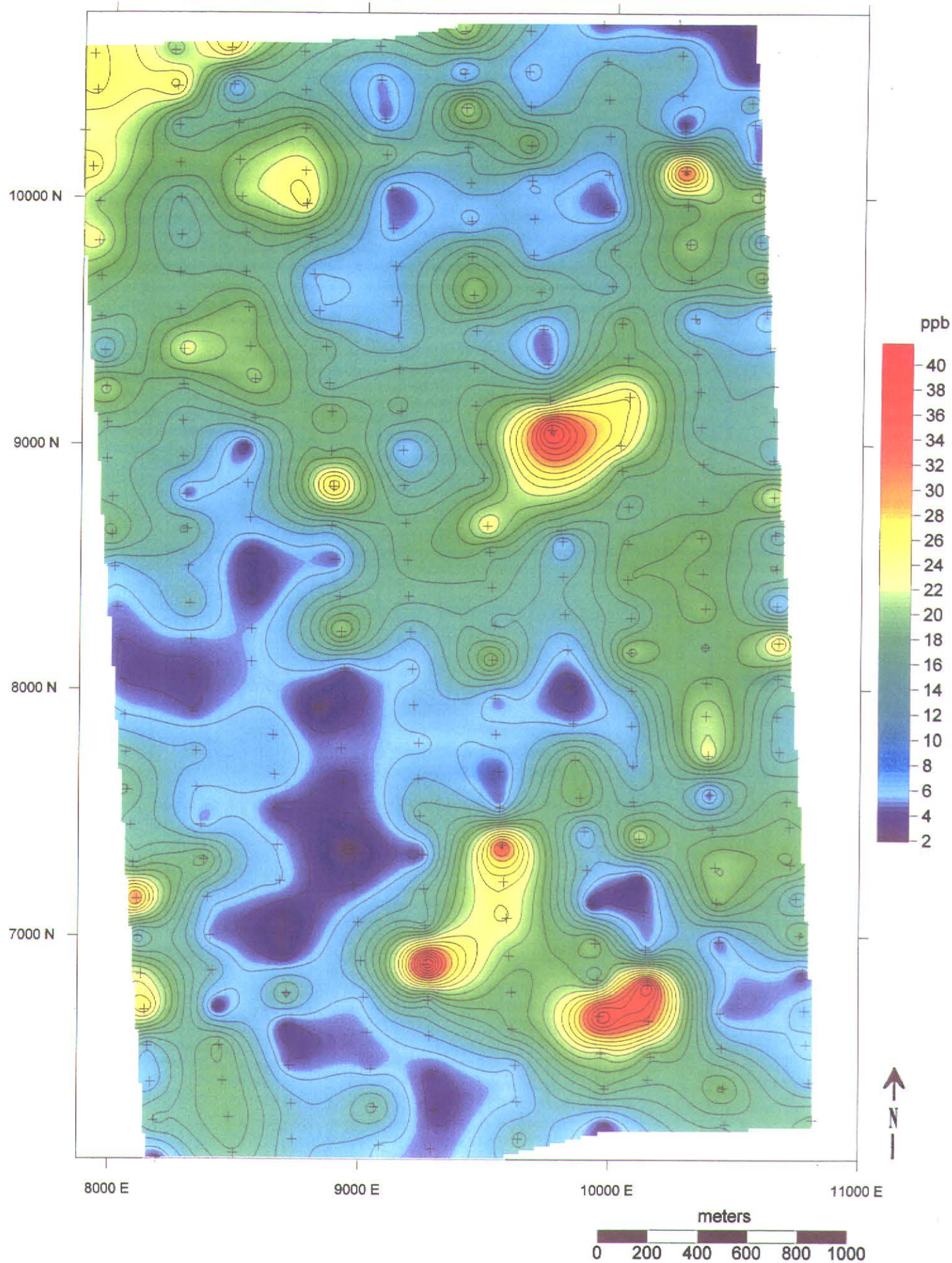


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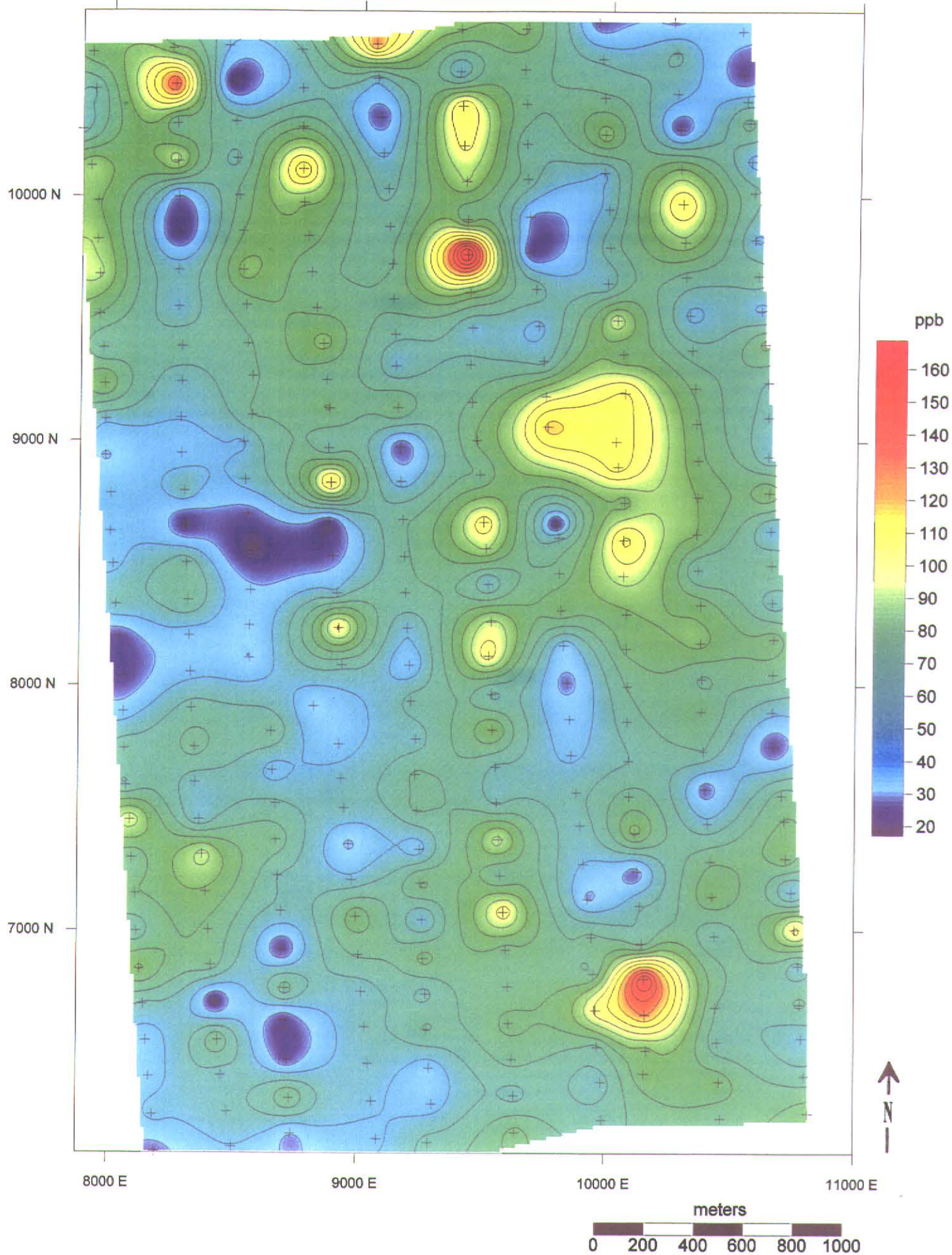


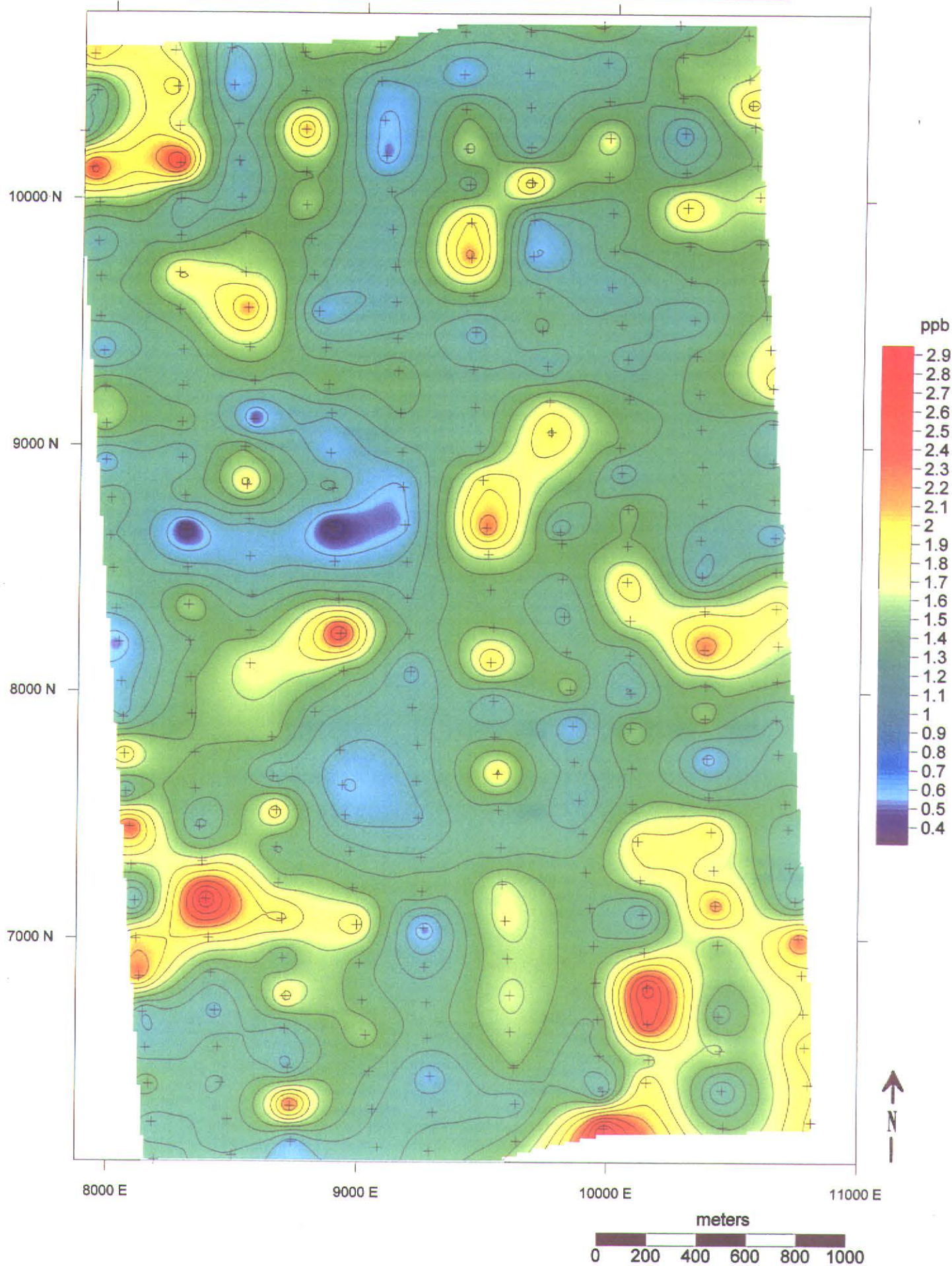


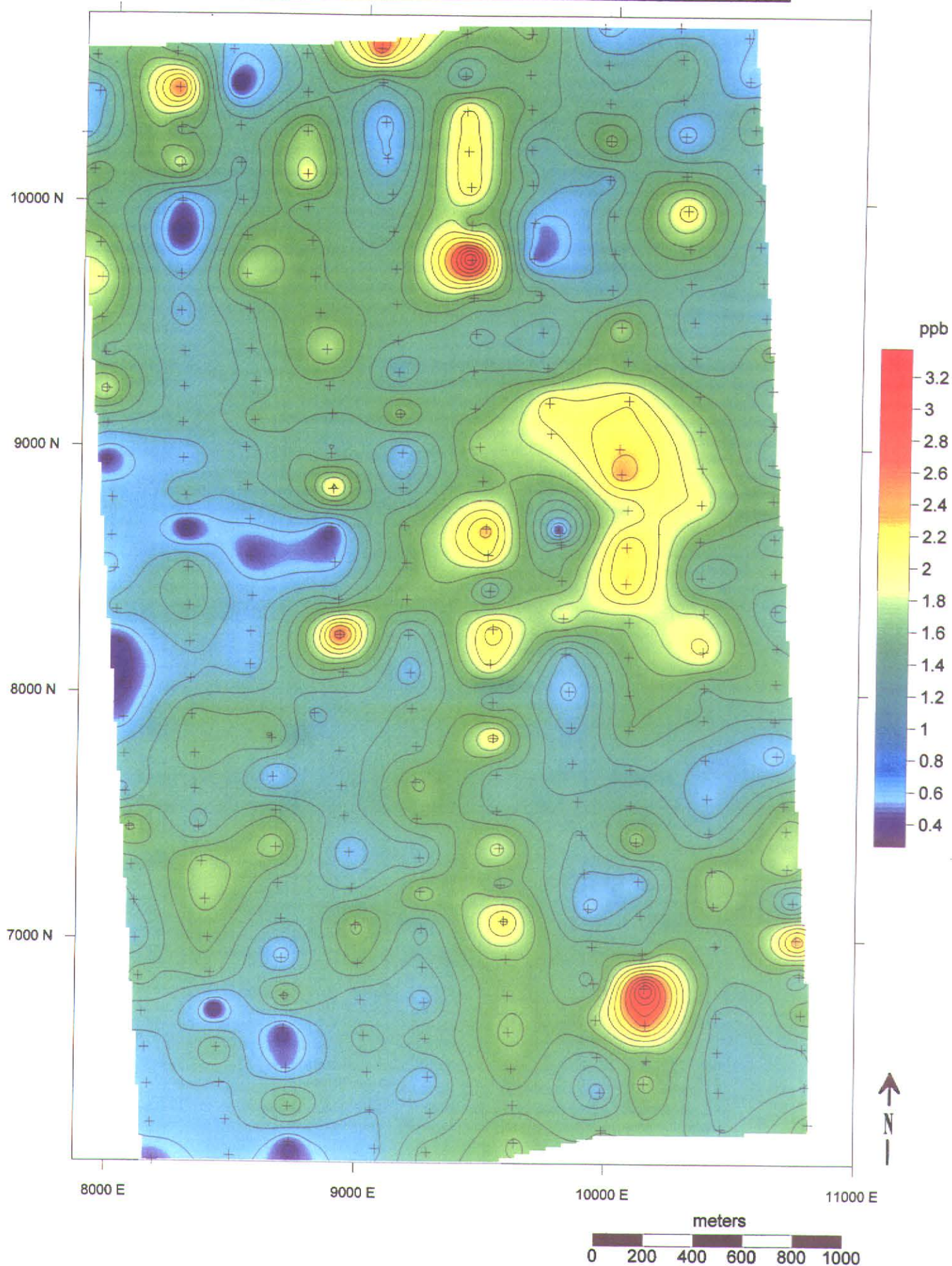




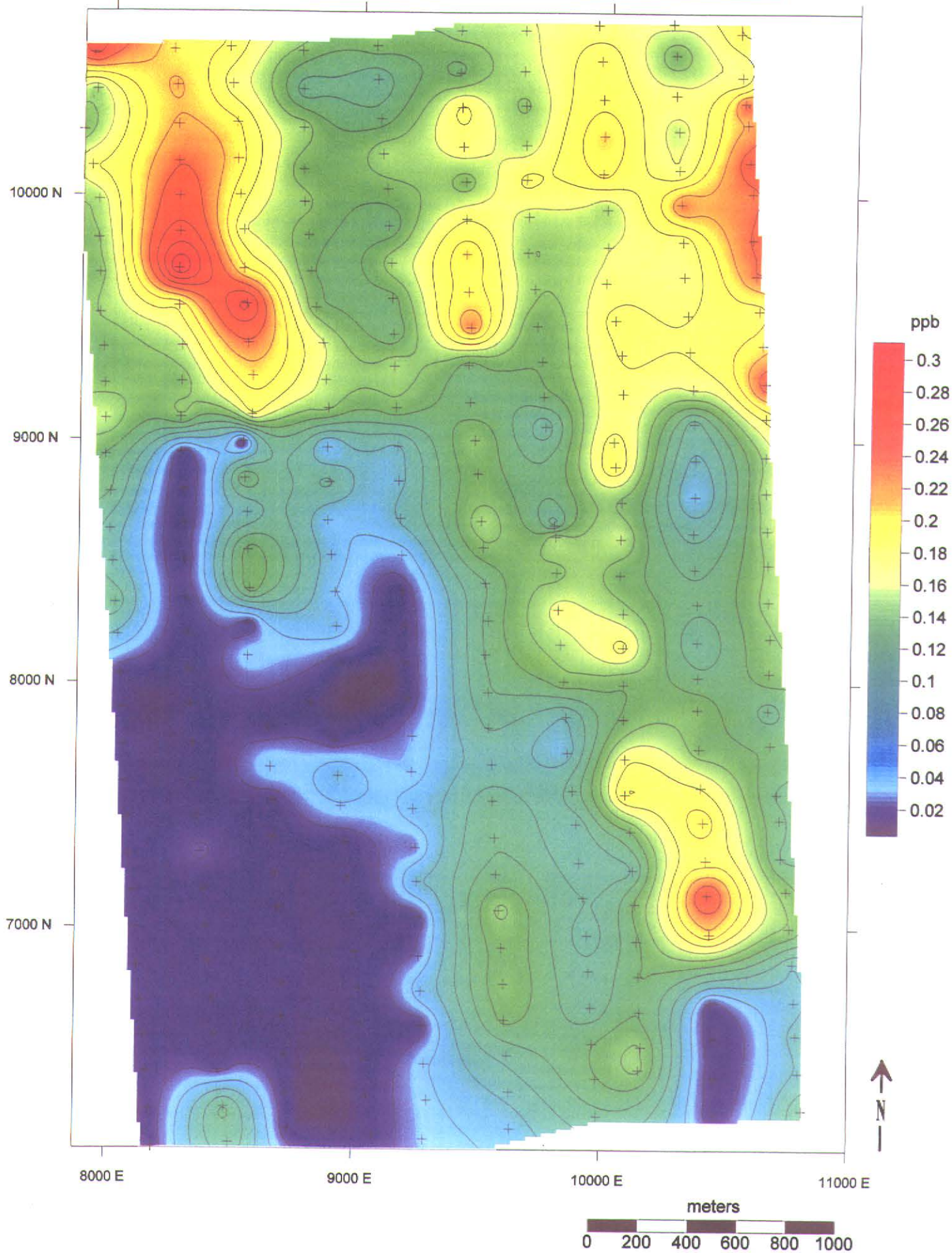
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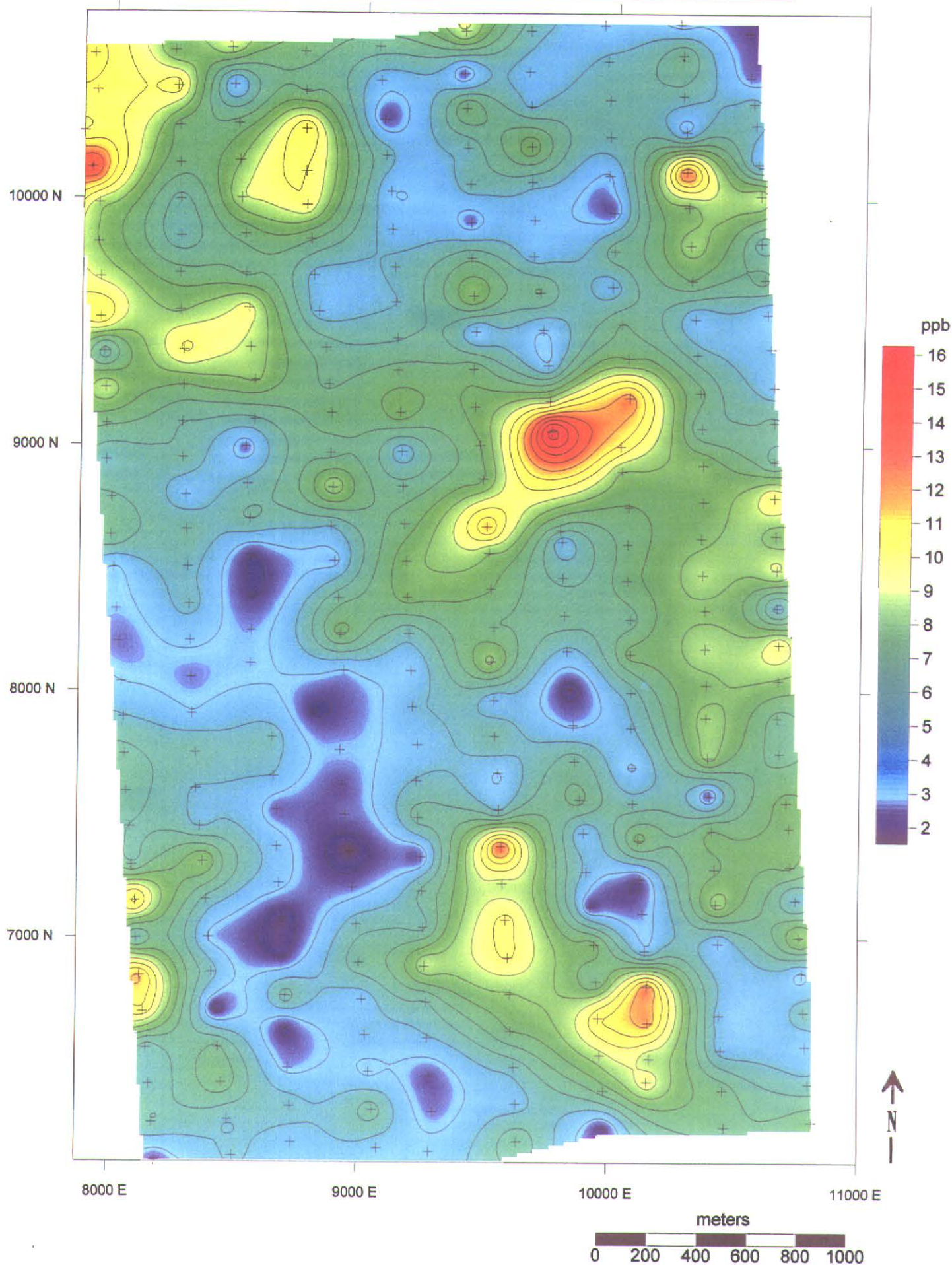


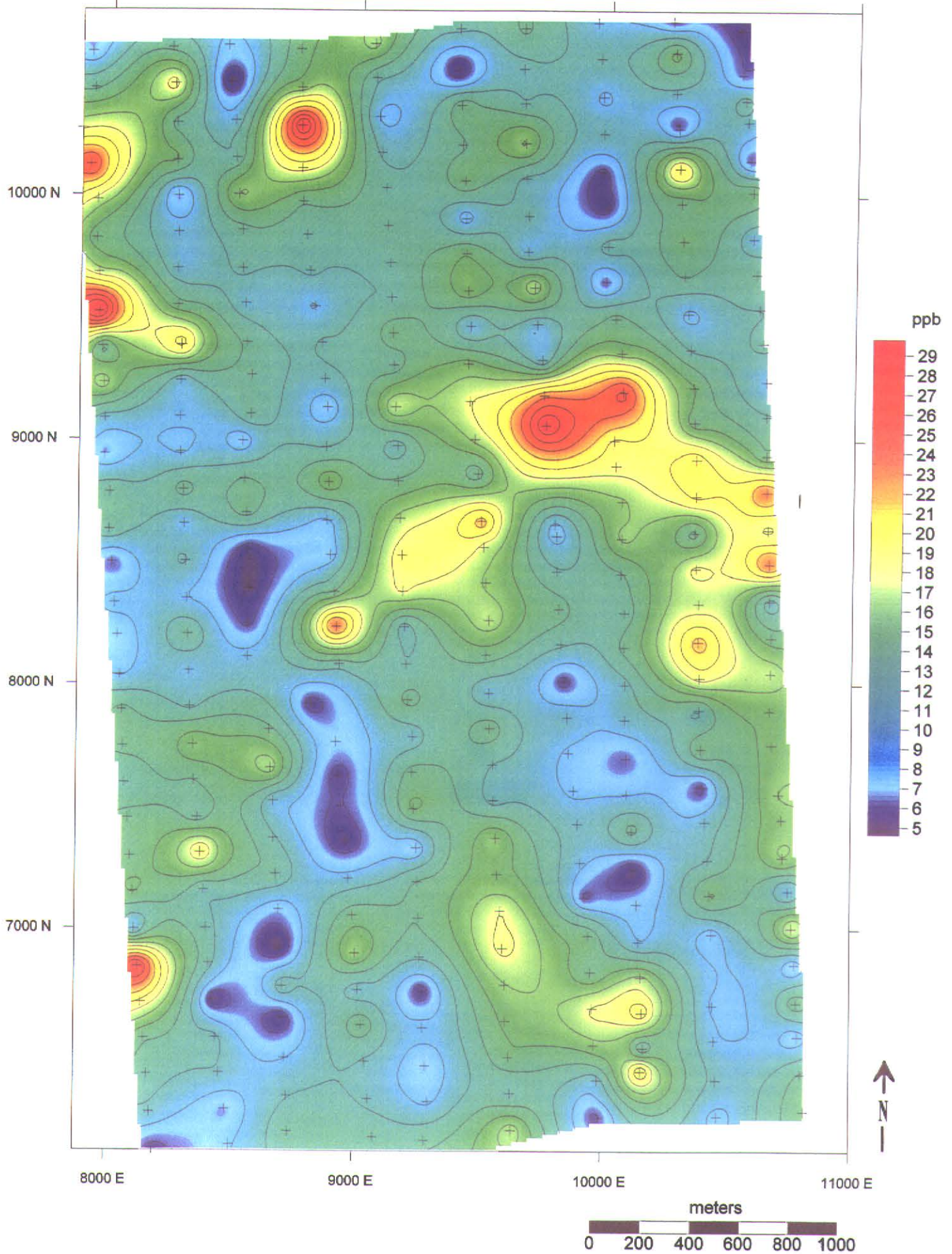


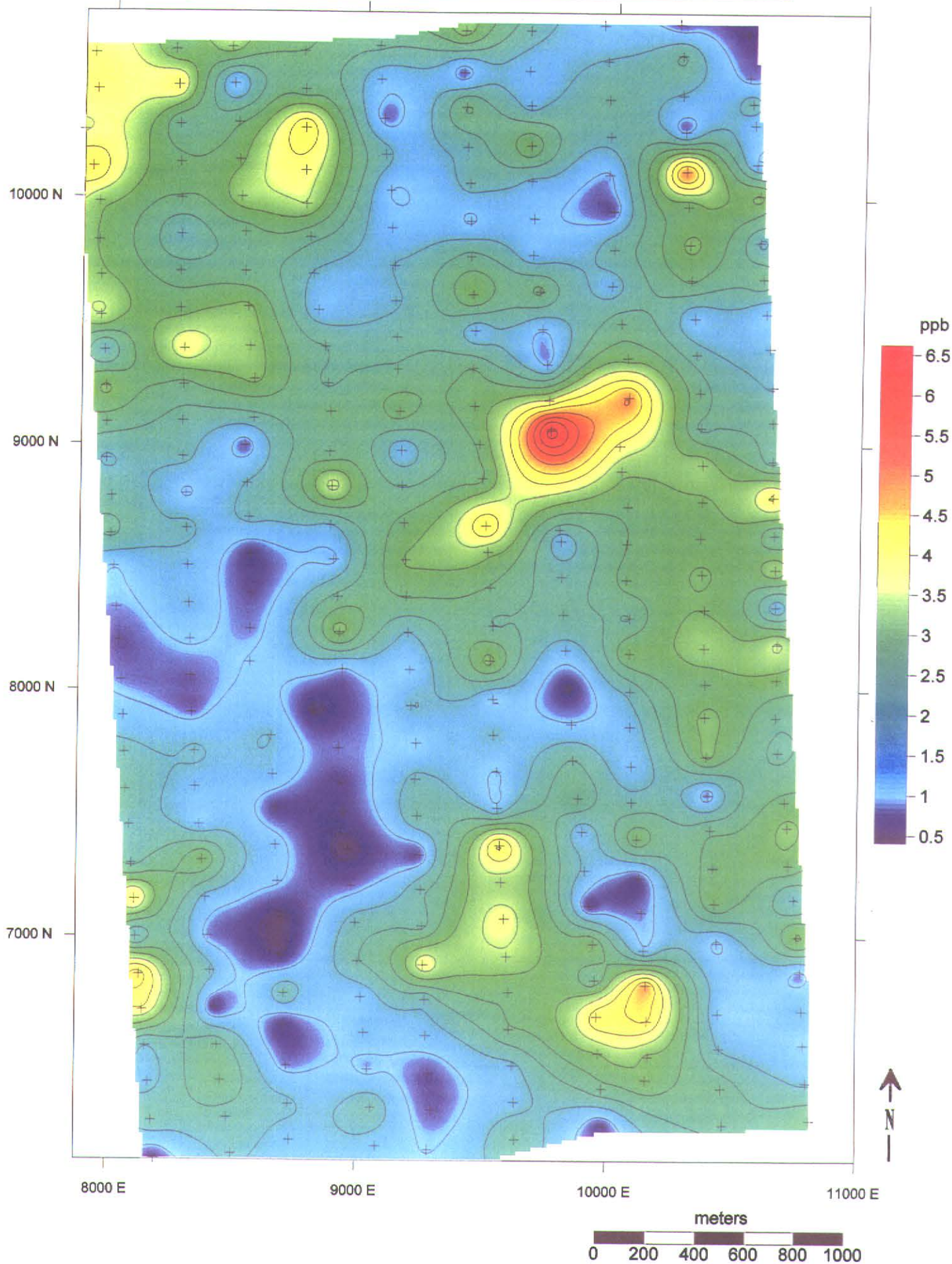


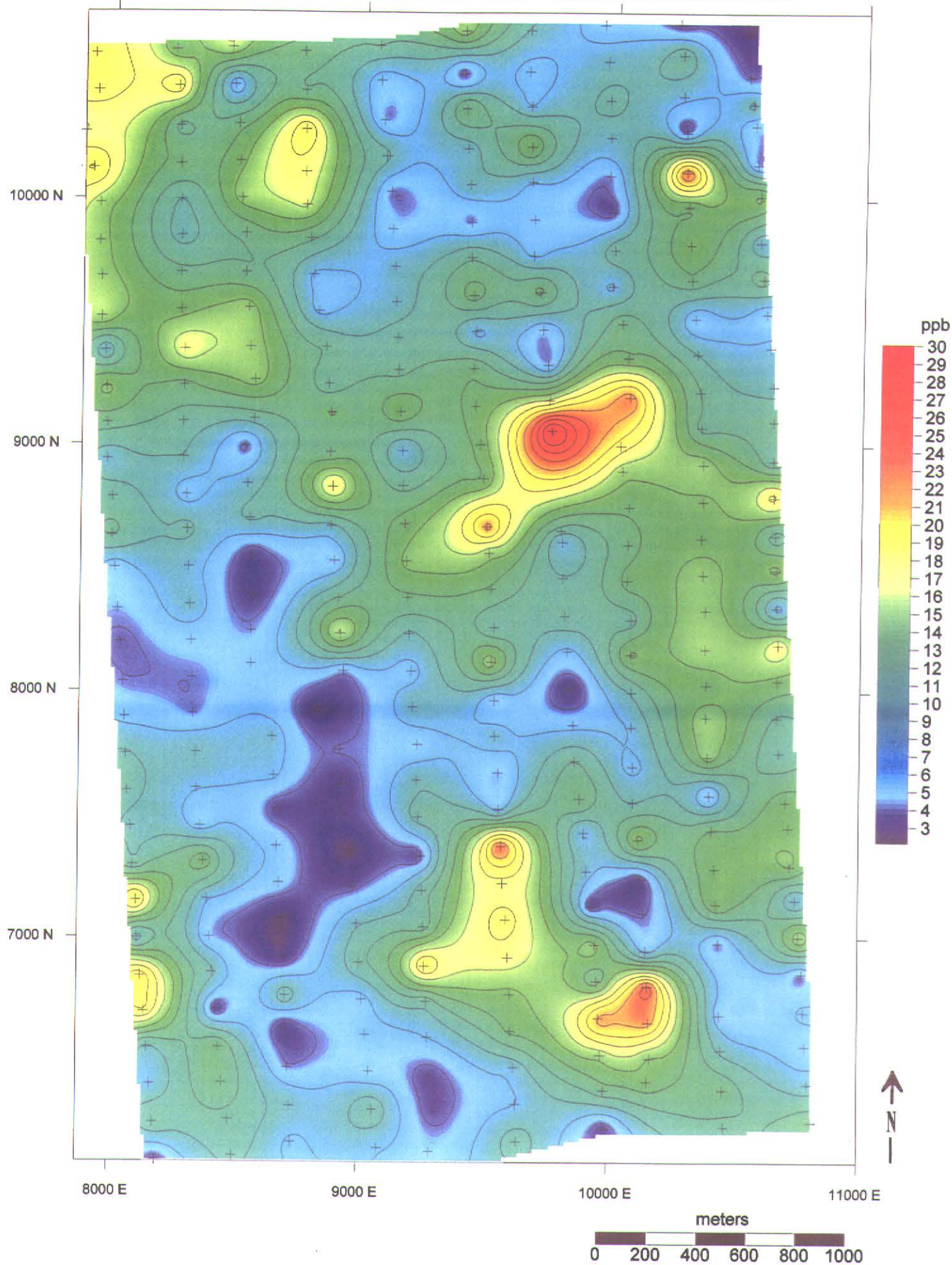
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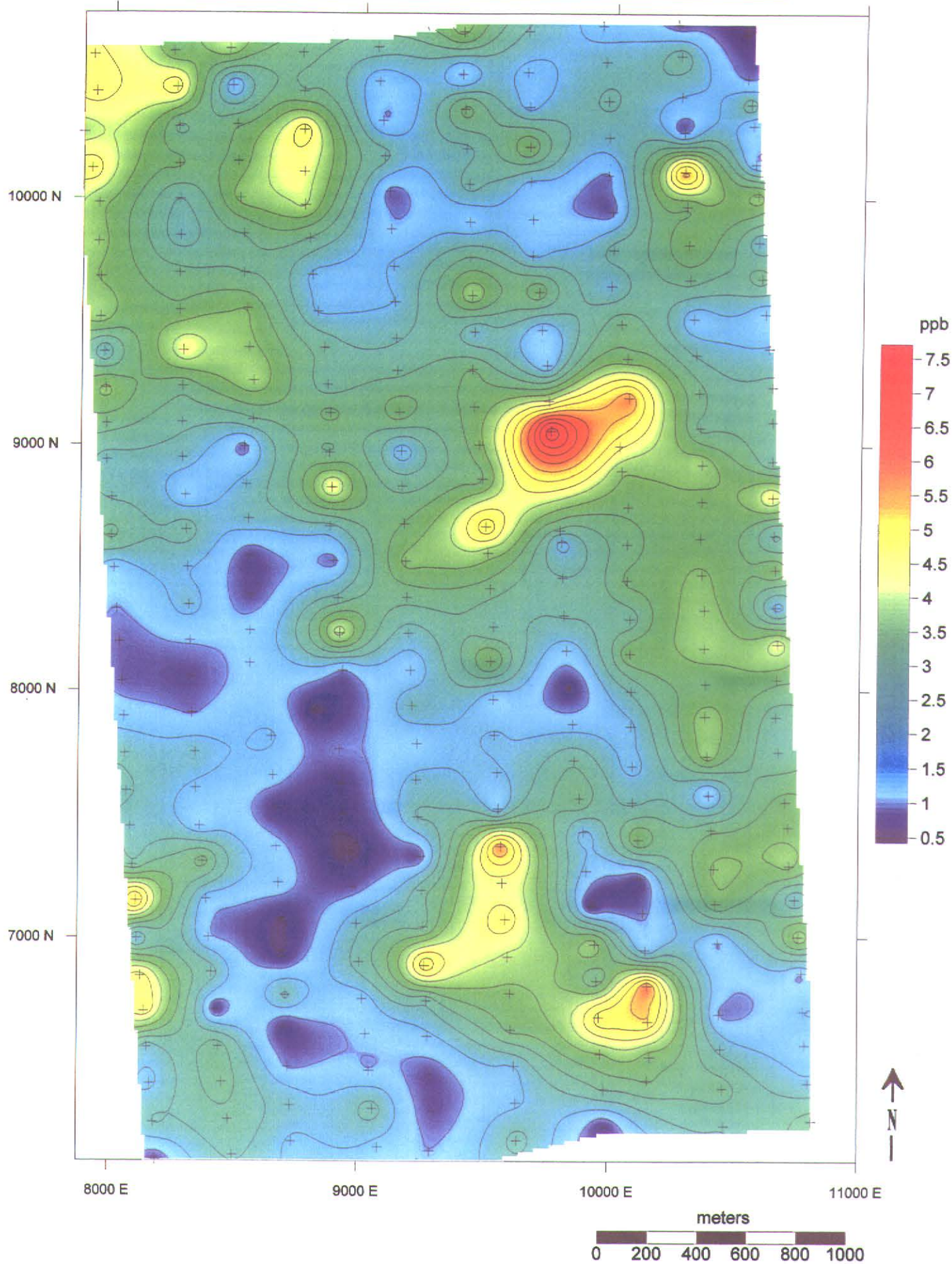


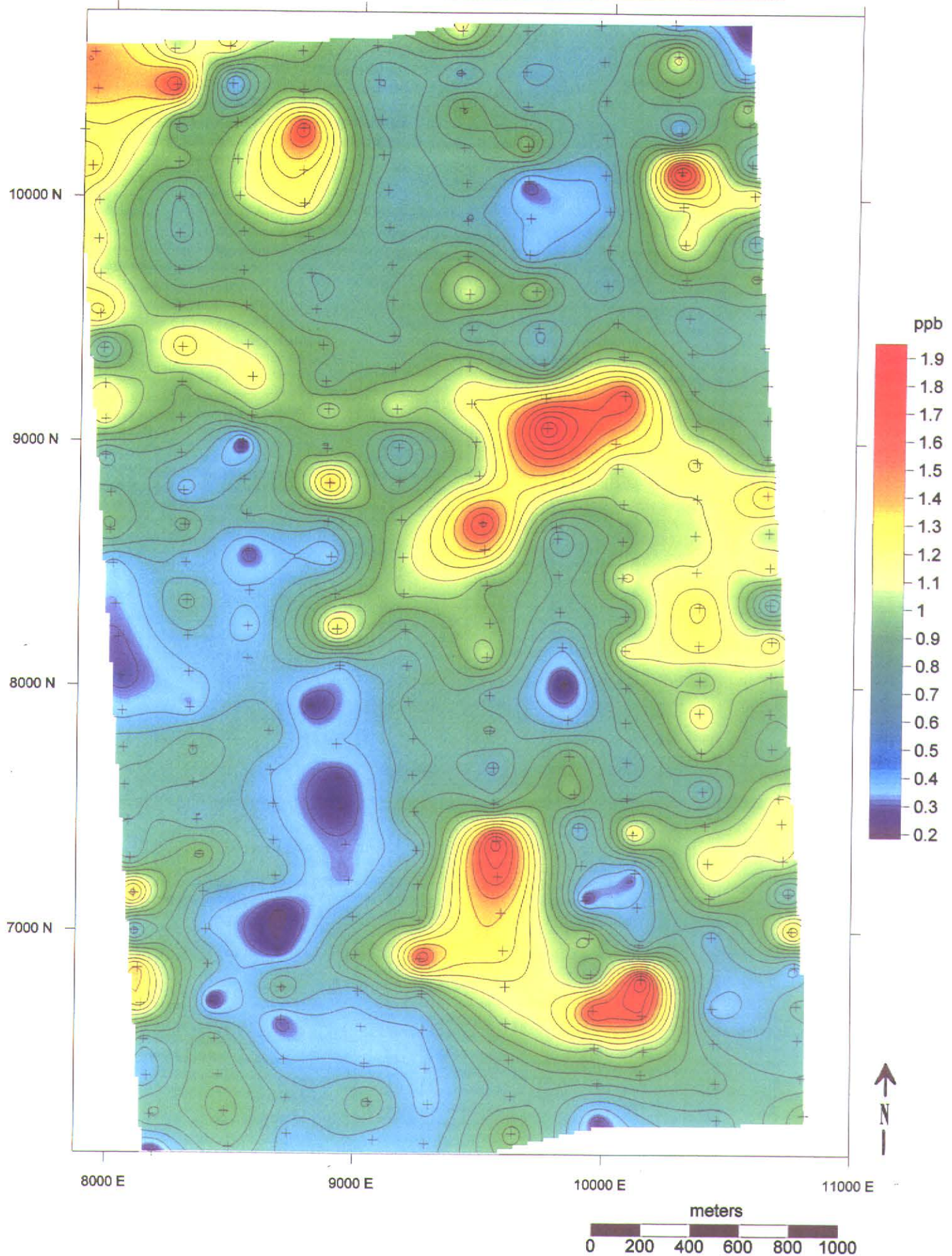


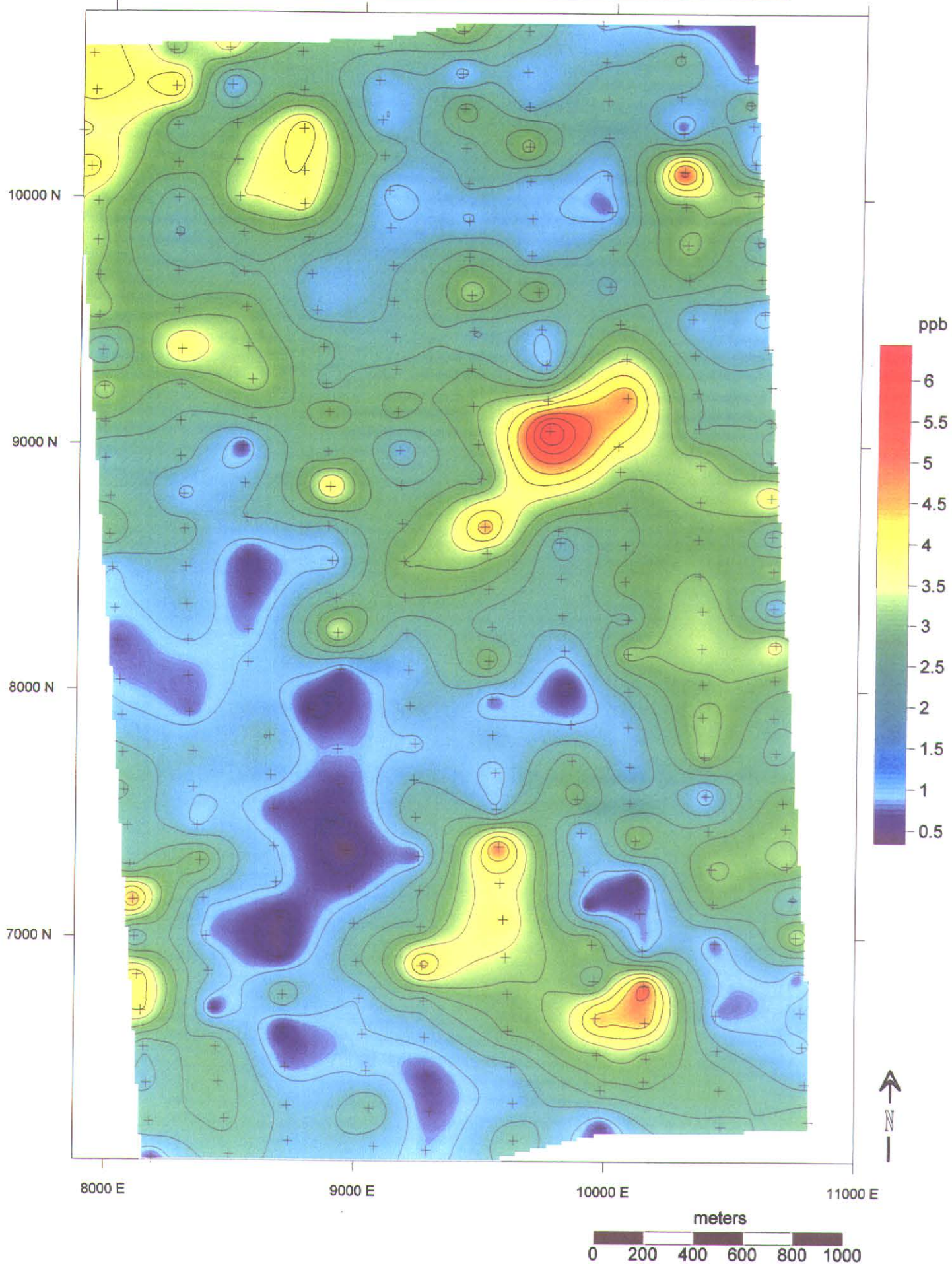


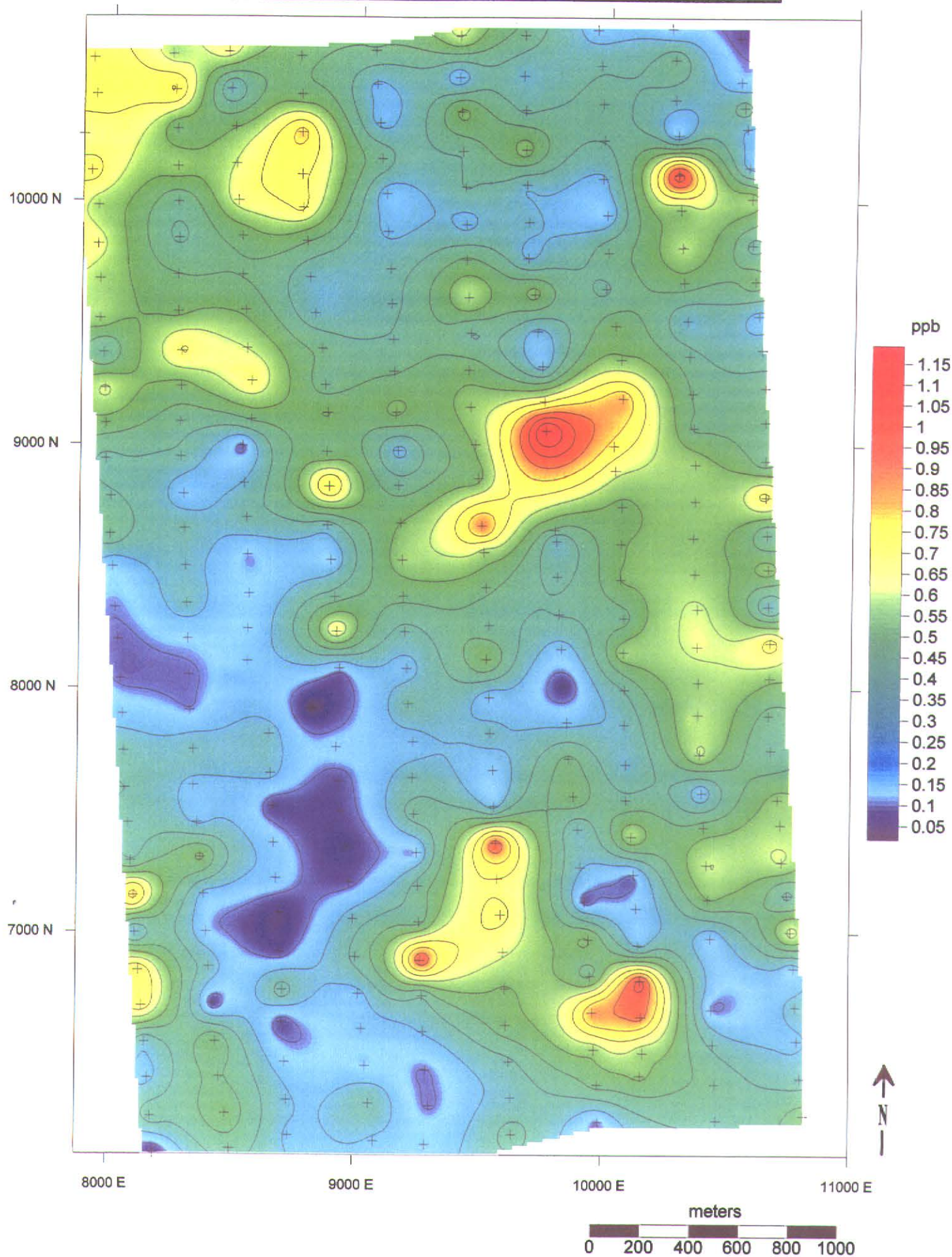


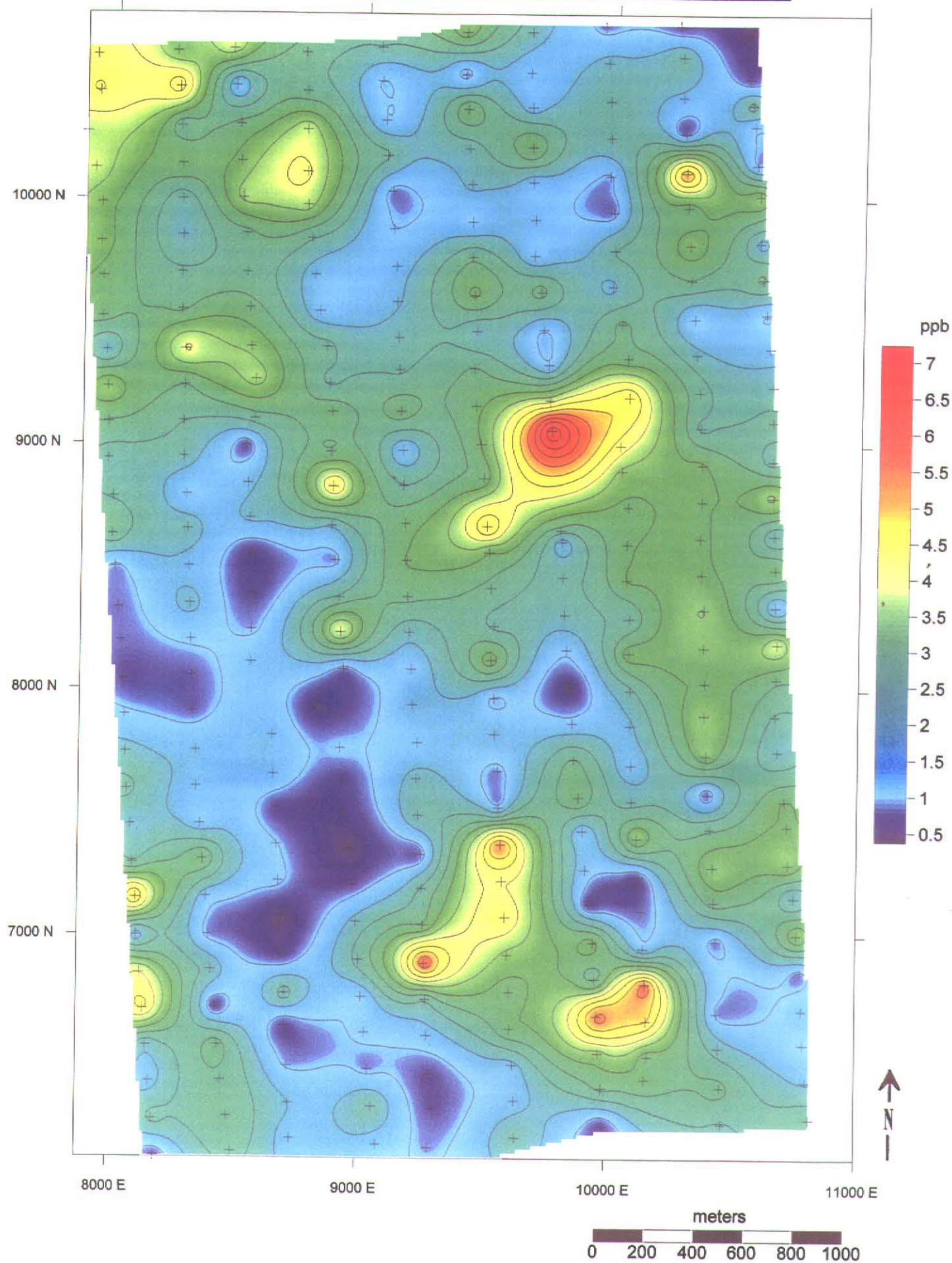




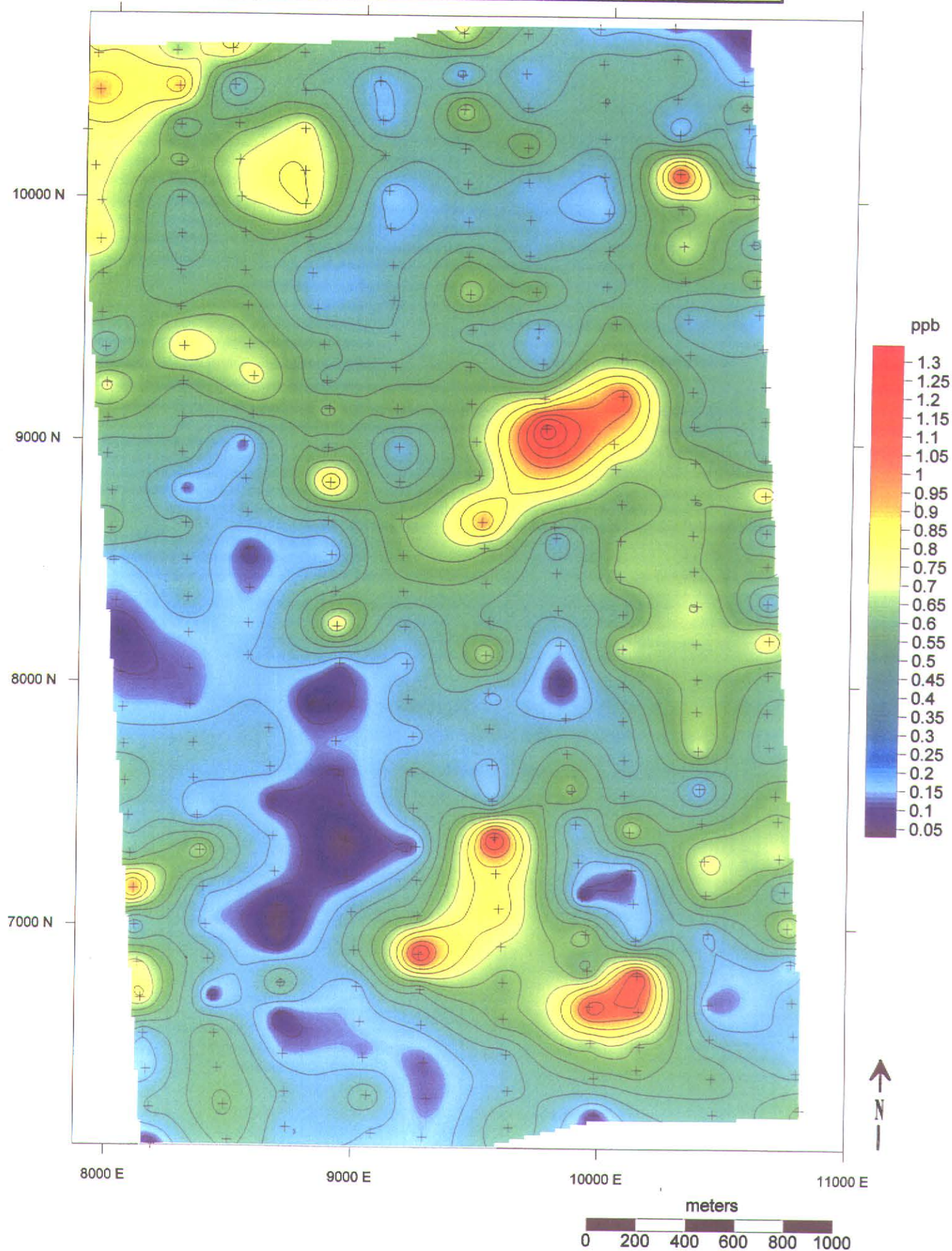


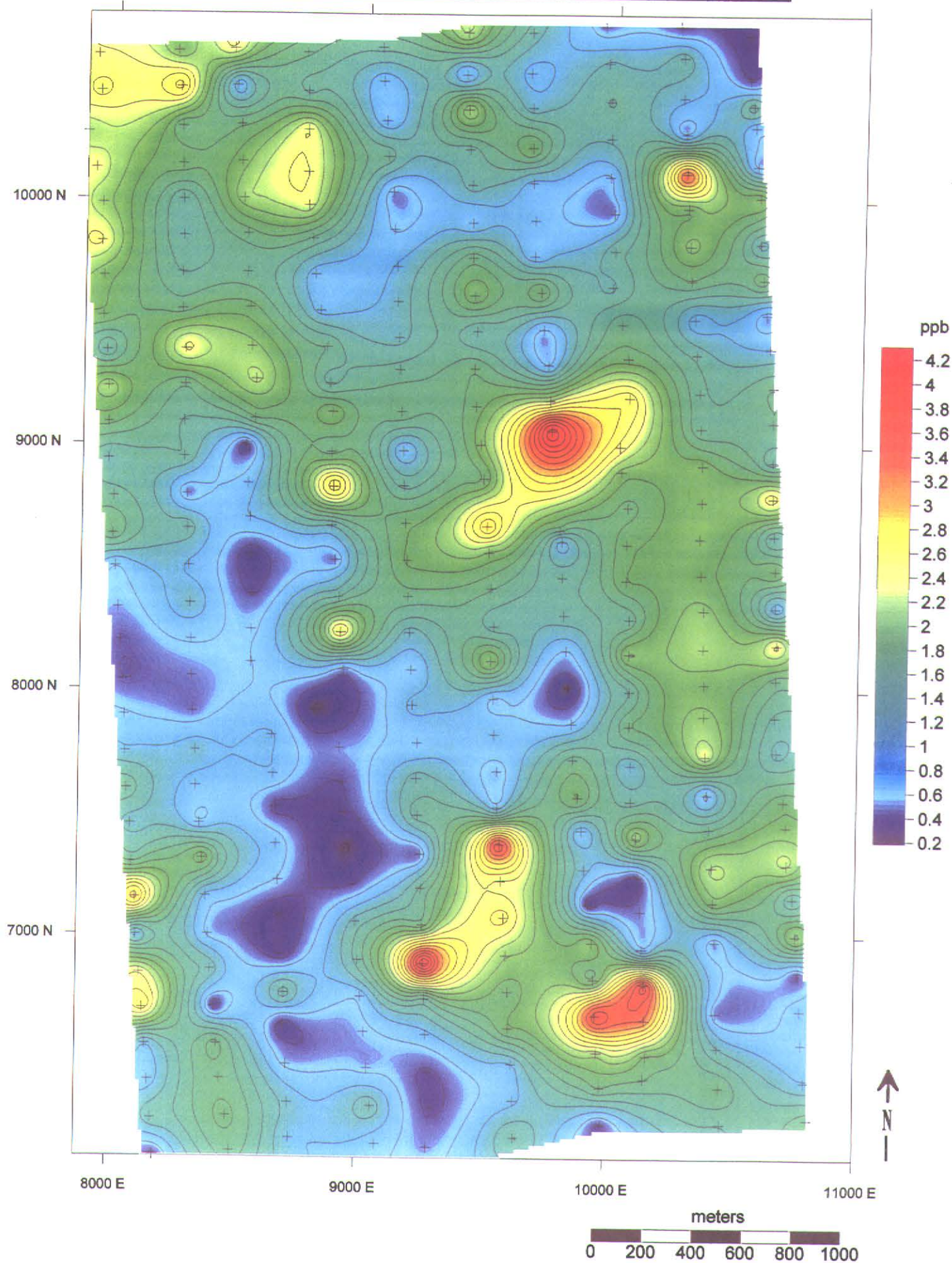


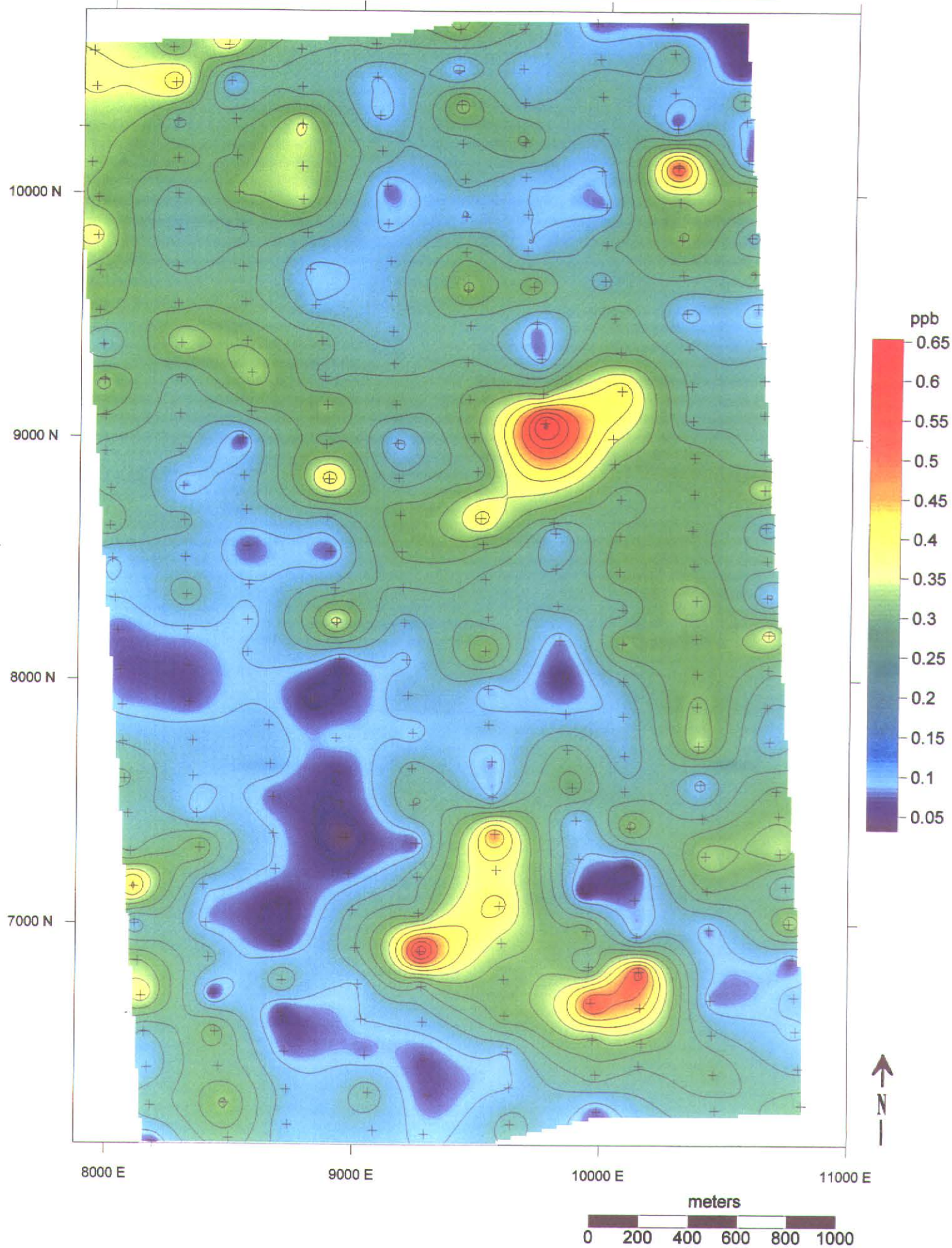




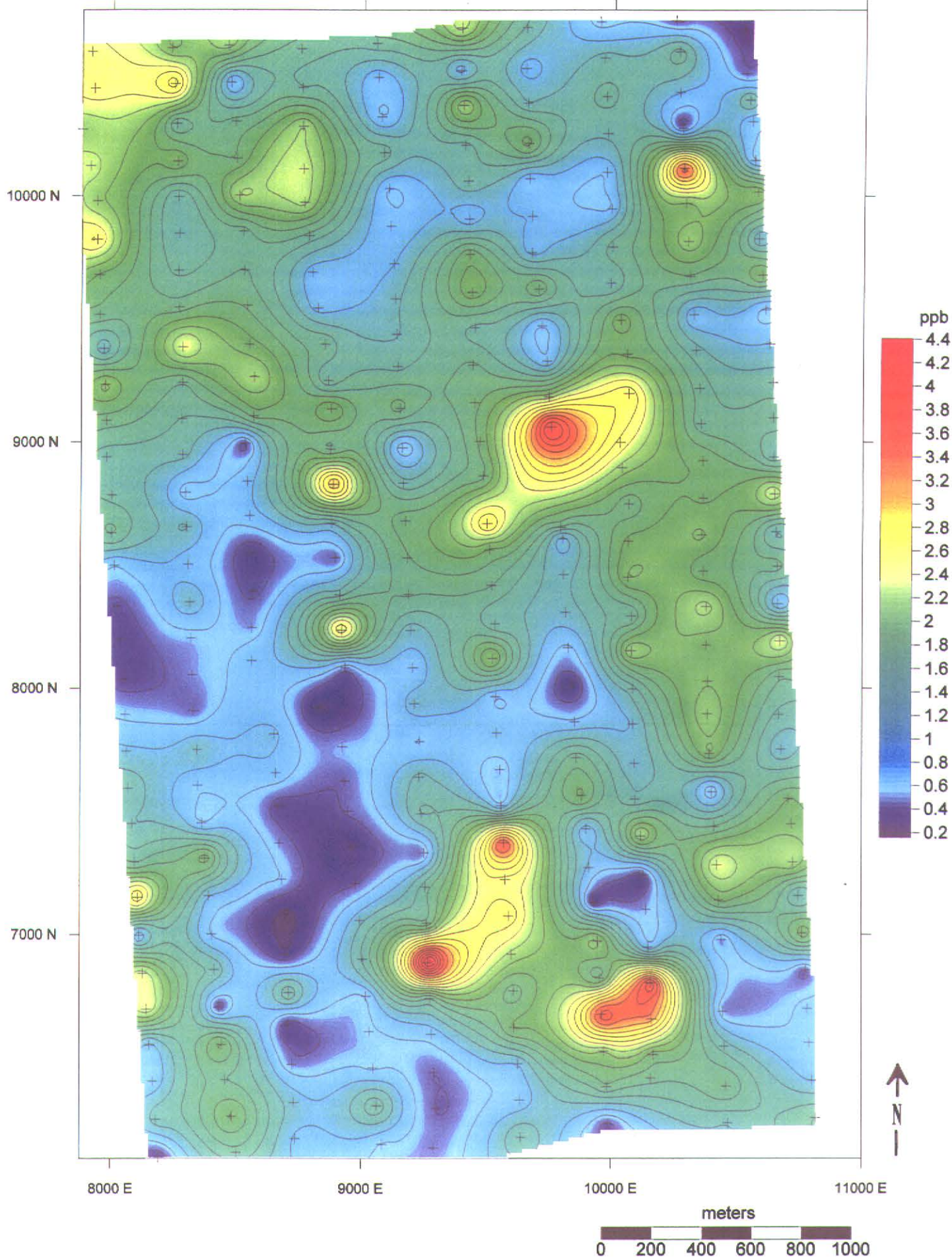
57

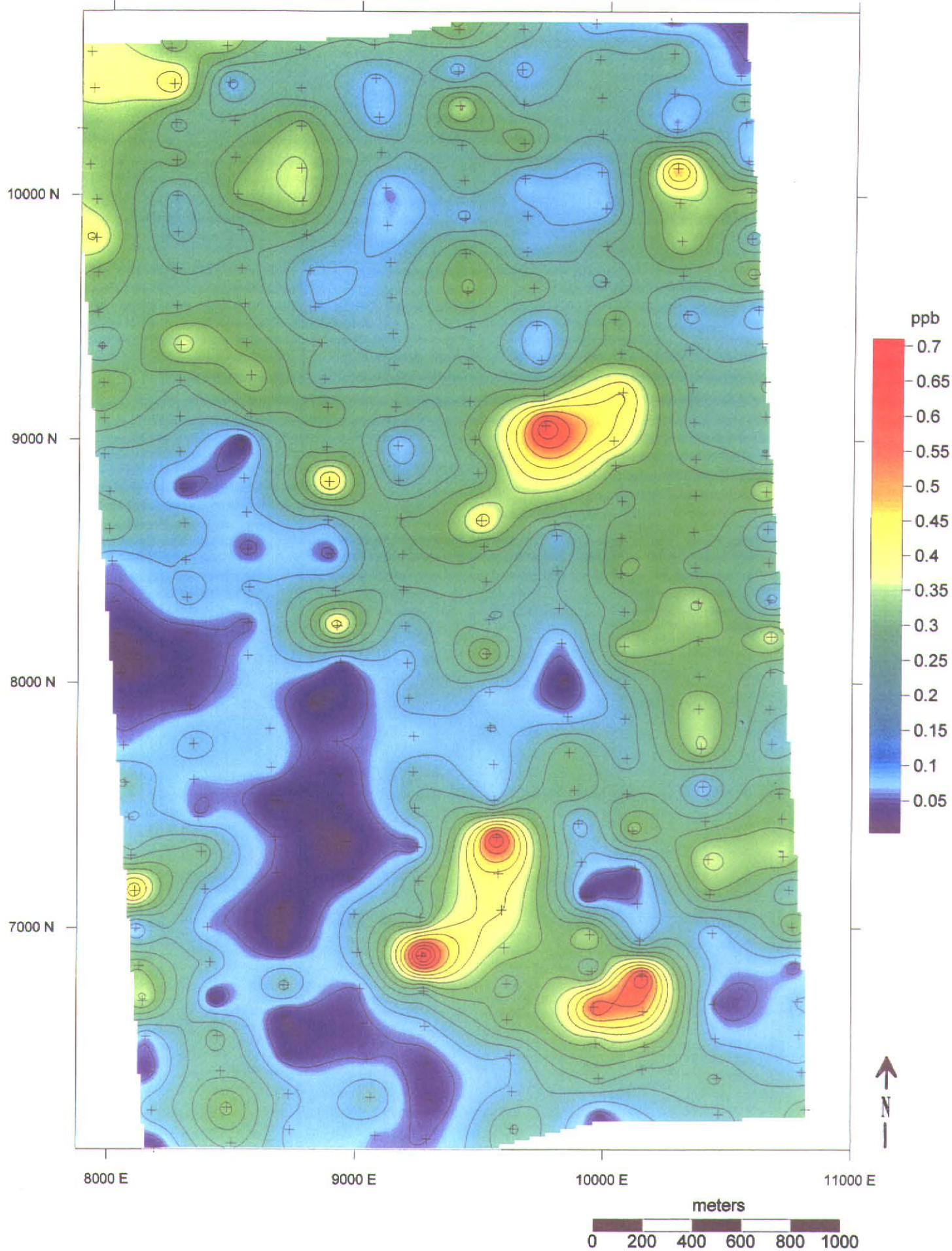


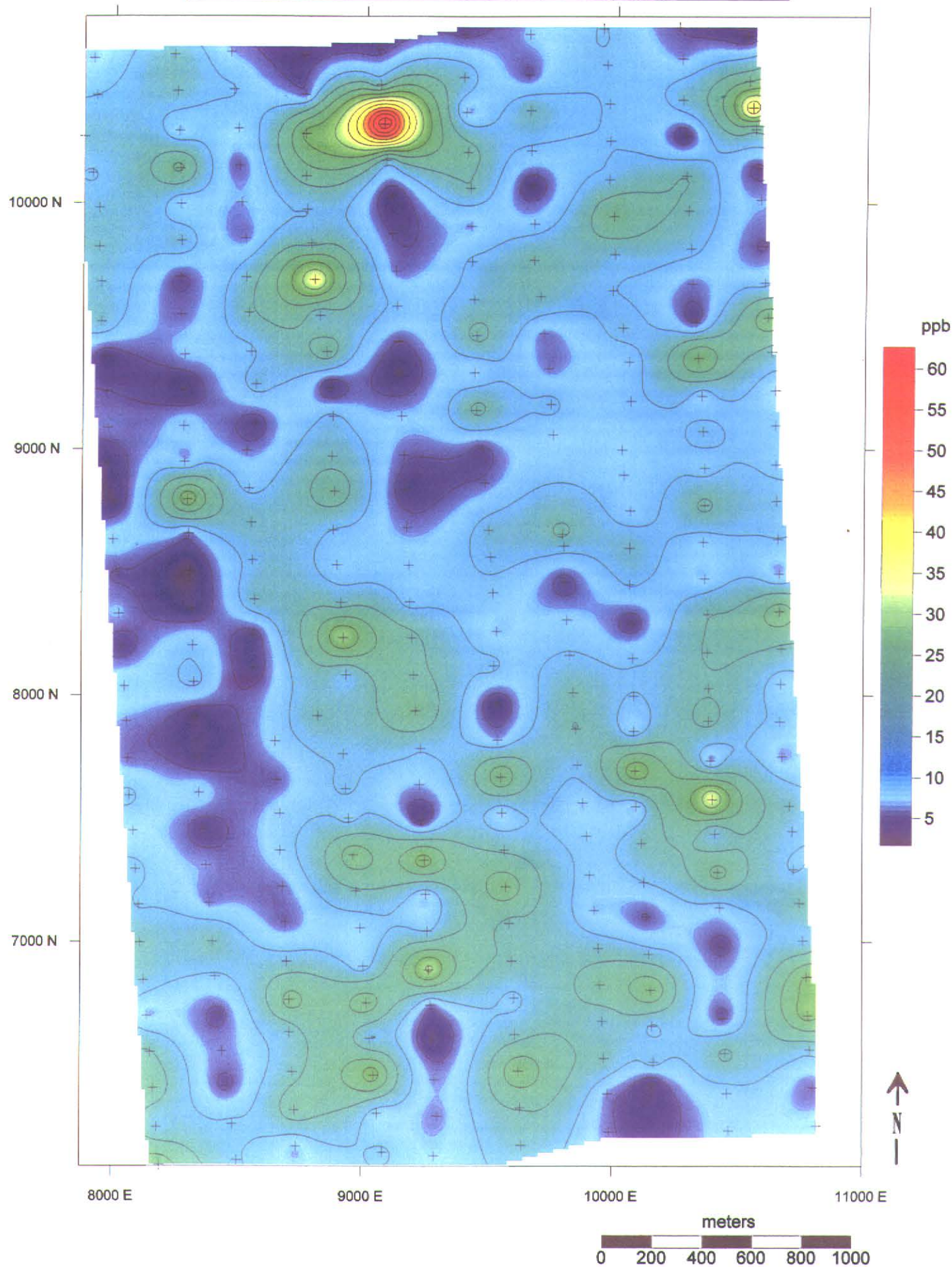




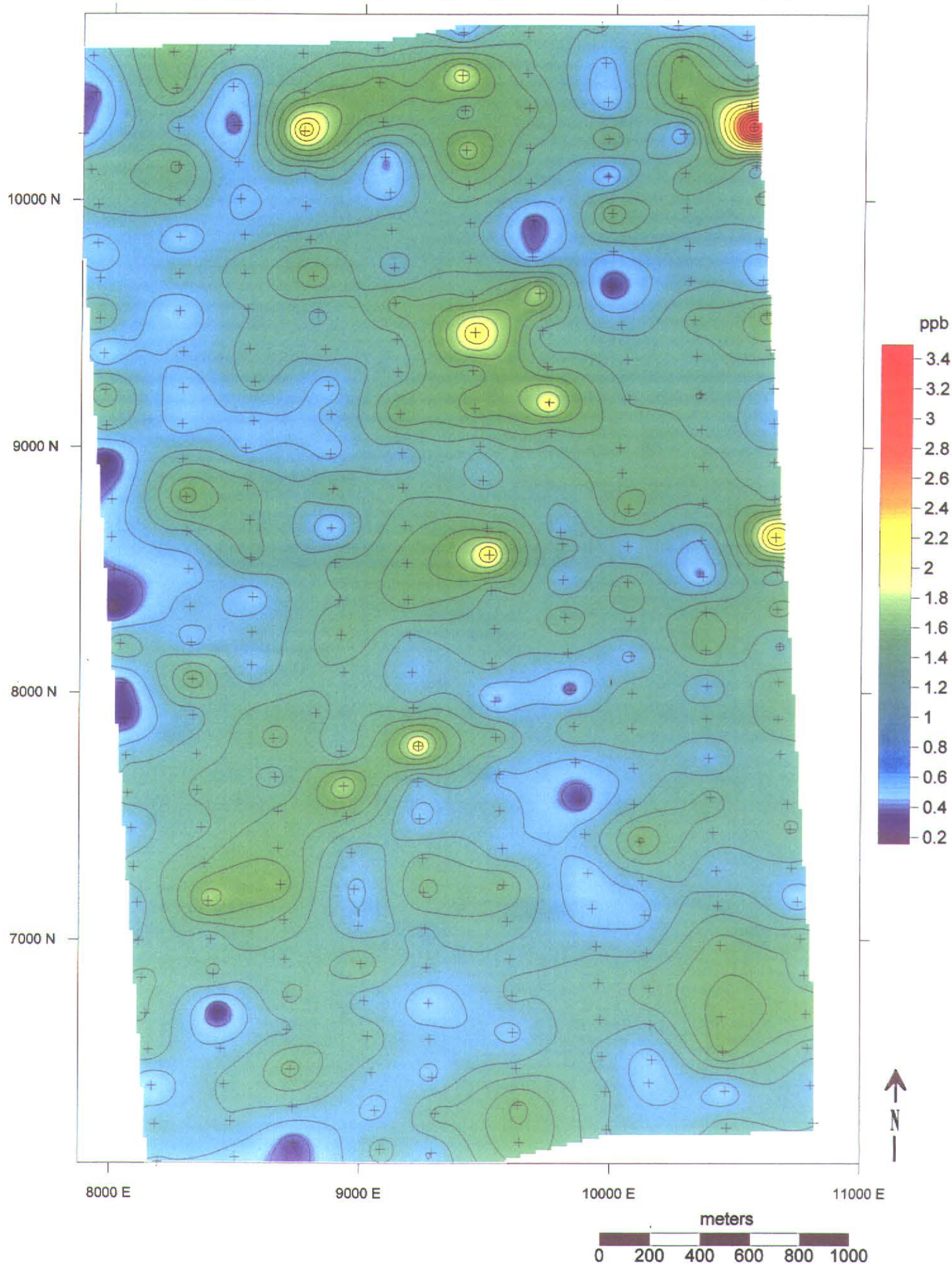
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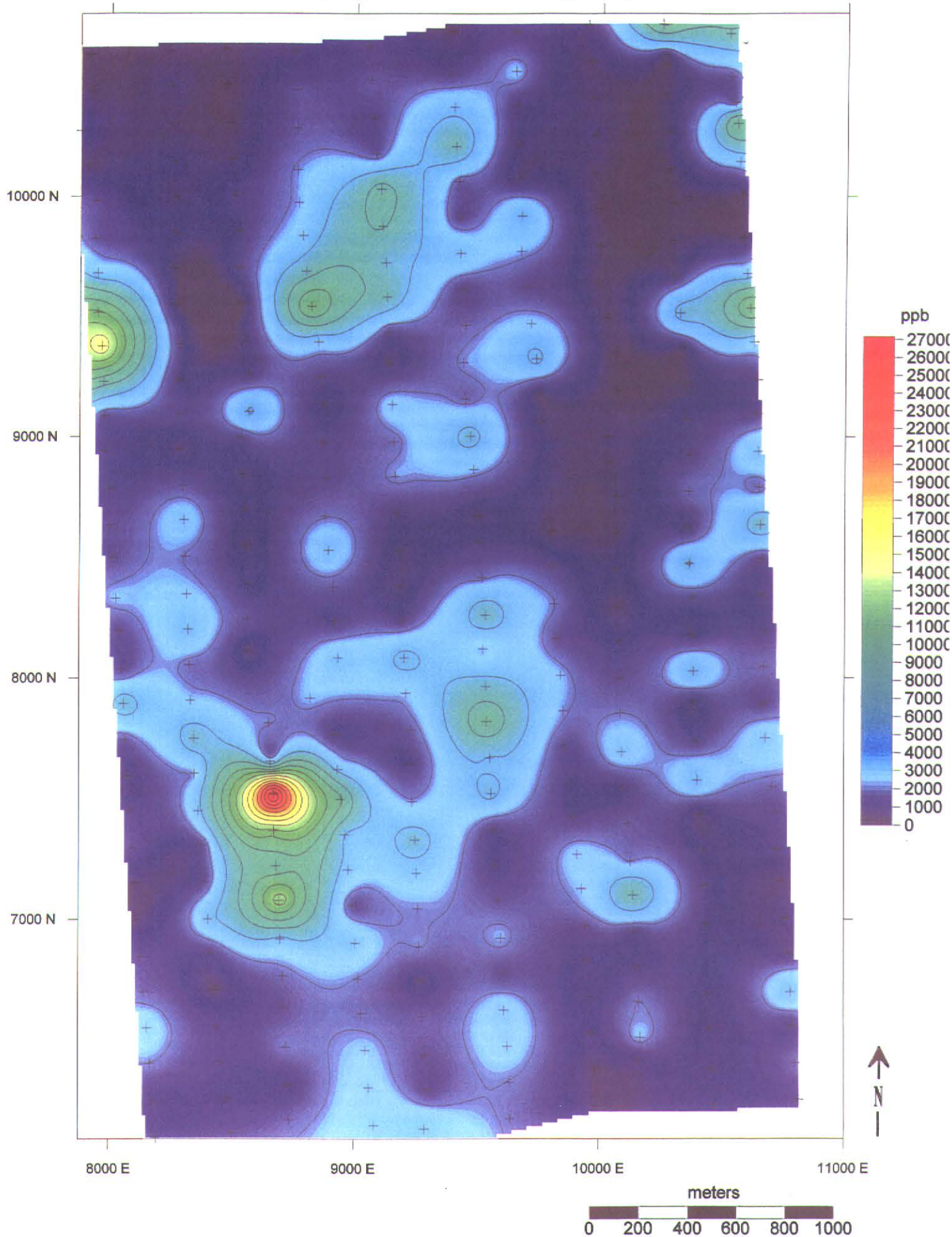


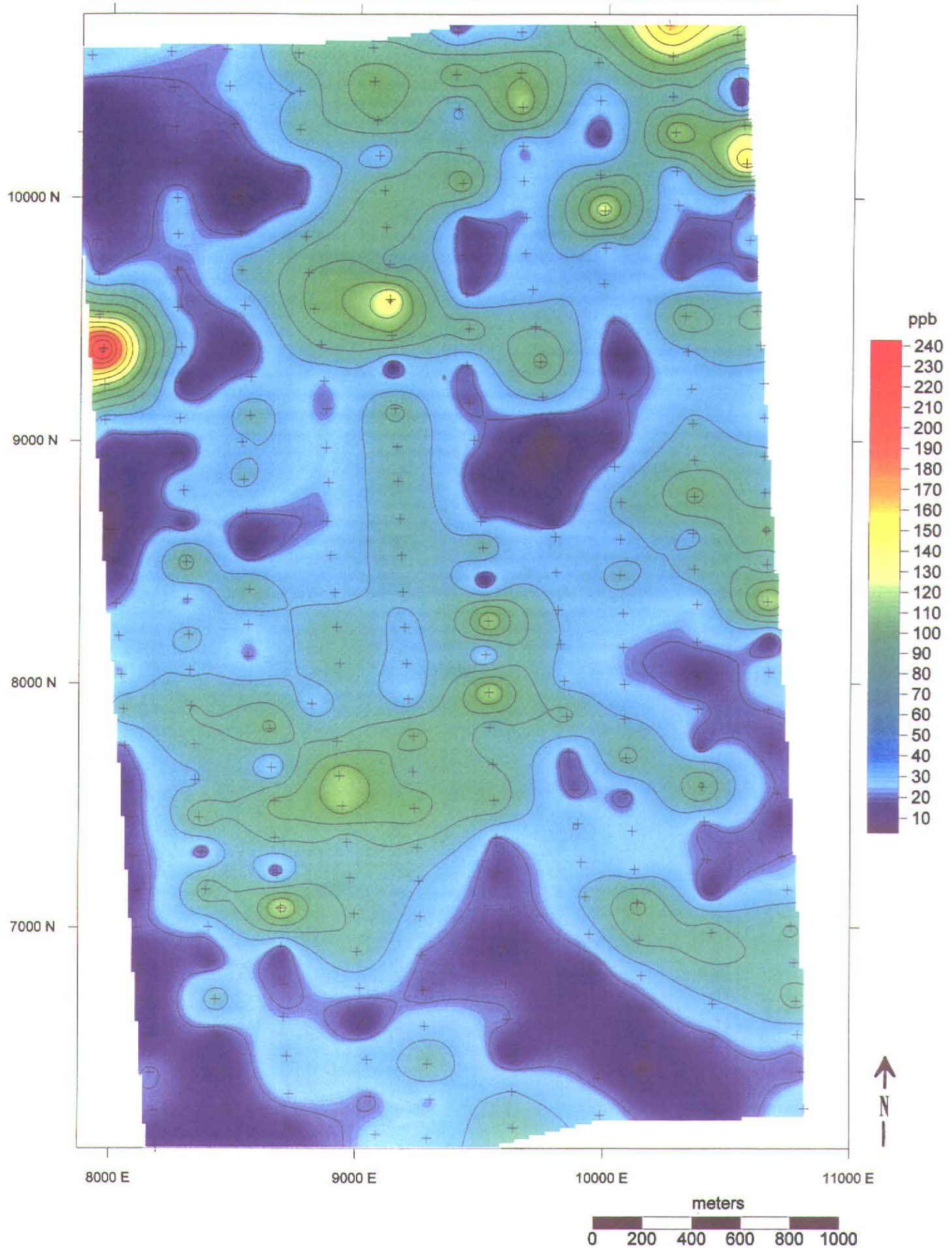


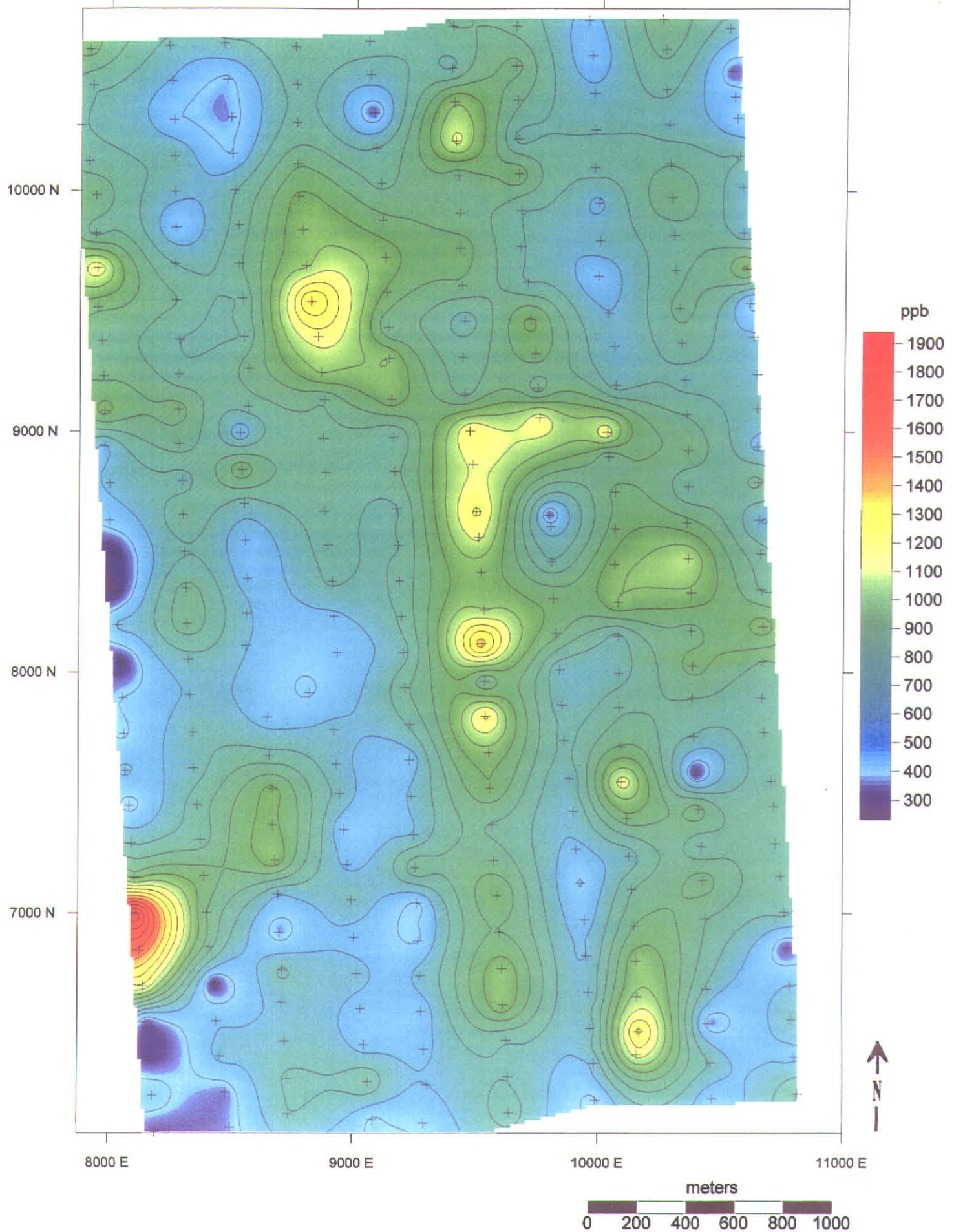


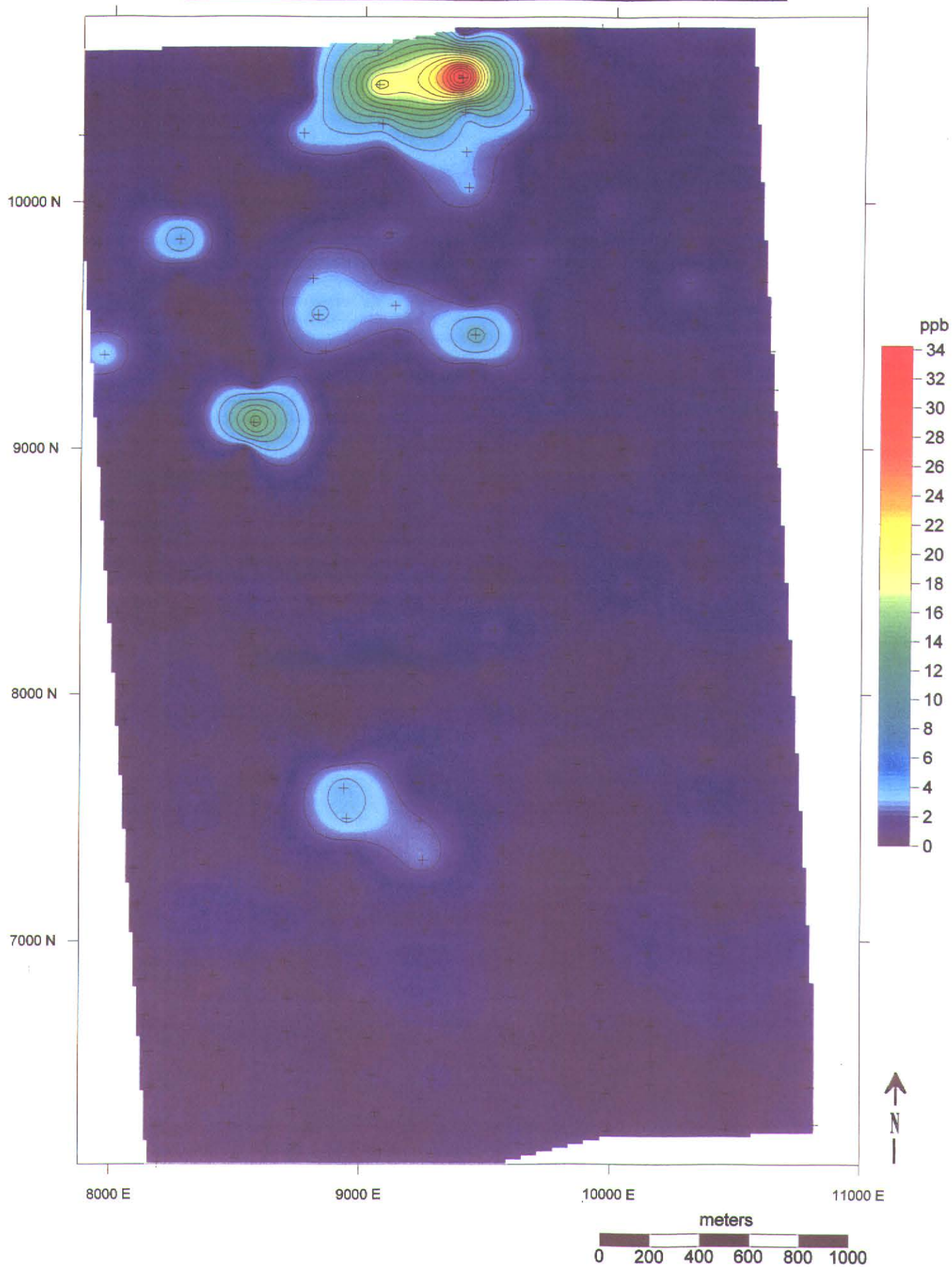
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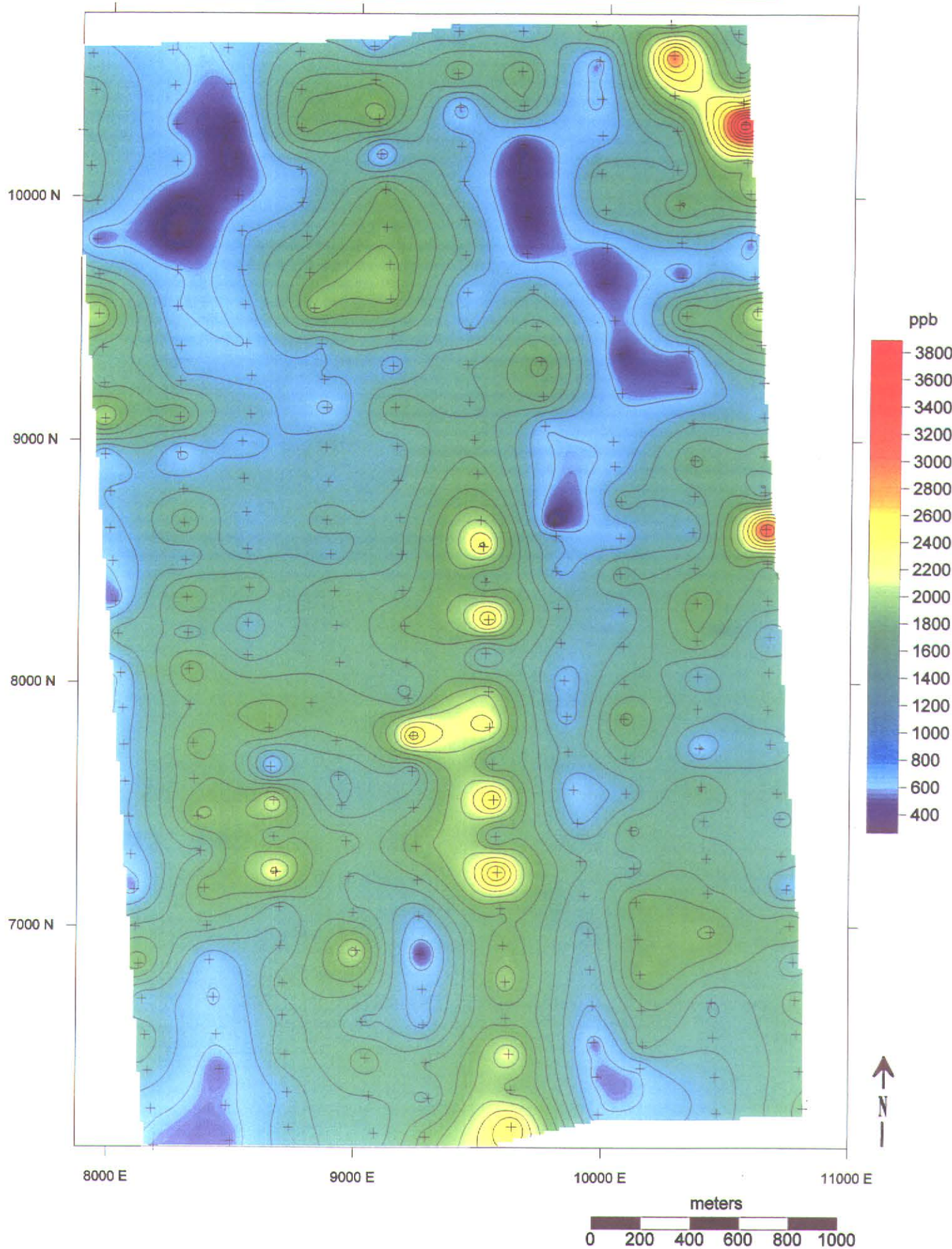


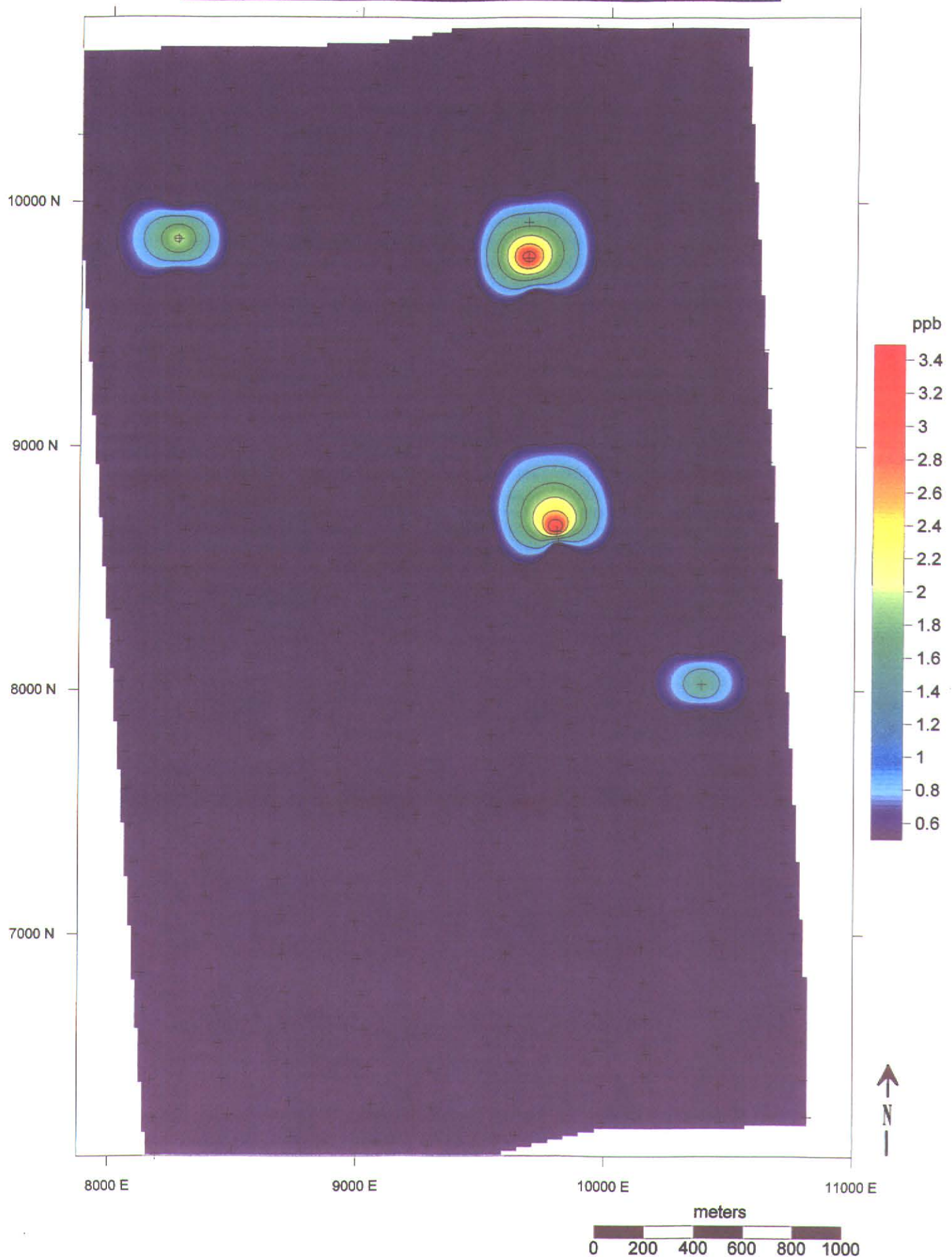












APPENDIX B

ANALYSES

17-Aug-01

ECO-TECH LABORATORIES LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

ICP CERTIFICATE OF ANALYSIS AK 2001-246

RAGNAR BRUASET
5851 Halifax Street
BURNABY, BC
V5B 2P4

Phone: 250-573-5700
Fax : 250-573-4557

ATTENTION: RAGNAR BRUASET

No. of samples received: 2
Sample type: Rock
Project #: None Given
Shipment #: None Given
Samples submitted by: Ragnar Bruaset

Values in ppm unless otherwise reported

Et #	Tag #	Sample Weight (g)	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	RB 2001-400R	4801	25	<0.2	0.54	5	45	<5	5.88	<1	21	29	210	5.05	<10	2.72	945	<1	0.03	11	1640	<2	<5	<20	408	<0.01	<10	91	<10	<1	32
2	RB 2001-453R	5070	10	<0.2	0.18	5	1480	<5	2.11	<1	8	107	5	1.72	<10	0.50	542	2	0.02	6	870	8	5	<20	107	<0.01	<10	15	<10	<1	44

1 out 2001 GRID POINT: L21W 4+565
2 out " " " L15W 25+165

QC DATA:

Resplit:

1	RB 2001-400R	25	<0.2	0.55	15	40	<5	5.83	<1	21	38	213	4.99	<10	2.66	929	2	0.03	13	1640	2	<5	60	394	<0.01	<10	90	<10	<1	32
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Repeat:

1	RB 2001-400R	-	<0.2	0.53	15	40	<5	5.90	<1	21	29	213	5.02	<10	2.69	937	<1	0.03	11	1610	<2	<5	60	399	<0.01	<10	90	<10	<1	32
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Standard:

GEO'01	125	1.0	1.83	60	140	<5	1.54	<1	19	55	86	3.42	<10	0.88	658	<1	0.02	25	710	20	10	40	62	0.10	<10	70	<10	<1	78
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FP/kk
dt/239
XLS/01
Fax: 804-294-3568

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

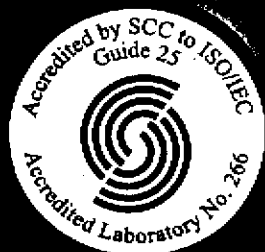
ANALTICAL PROCEEDURE FOR ENZYME LEACH SAMPLES

Samples which are not completely dry are dried at 40°C then sieved through a –60 stainless steel mesh. The samples are then leached using the Enzyme Leach procedure given in Clark et al (1990), and Clark (1993, 1995). Concentrations for 61 elements at the detections limits indicated in the attached list are determined by a state-of-the-art Perkin Sciex ELAN 6000 ICP-MS.

2001 Fee Schedule

Activation Laboratories Ltd.
*Quality Analysis...
Innovative Technologies*

2001 Fee Schedule



Enzyme LeachSM Services

Code	7	7EnhEL	7SaltEL	7TS	7PGETS
	Enzyme Leach SM (ppb)	Enhanced Enzyme Leach SM (ppb)	High Salt Samples (ppb)	TerraSol SM (ppb)	PGE TerraSol SM (ppb)
Analyte					
Li	2	0.5	10	20	2
Be	2	0.1	20	5	0.5
S.O.Cl	2ppm	1ppm	3ppm	150ppm	25ppm
S.O.Sc	100	10	1000	500	50
S.O.Ti	100	10	1000	200	20
V	1	0.1	5	50	5
Cr	20	3	50	400	40
Mn	1	0.4	10	50	5
Co	1	0.2	1	5	0.5
Ni	3	1	5	100	10
Cu	3	1	5	50	5
Zn	10	5	10	200	20
Ga	1	0.3	1	5	0.5
Ge	0.5	0.05	1	10	1
As	1	0.1	5	50	5
Se	5	1	30	200	20
Br	5	1	30		
Rb	1	0.1	1	5	0.5
Sr	1	0.1	1	10	1
Y	0.5	0.05	1	2	0.2
Zr	1	0.1	1	4	0.4
Nb	1	0.1	1	4	0.4
Mo	1	0.1	1	10	1
Ru	1	0.5	1	10	0.2
Rh					5
Pd	1	0.5	1	20	1
Ag	0.2	0.1	0.2	250	25
Cd	0.2	0.1	0.2	5	0.5
In	0.1	0.01	0.2	2	0.2
Sn	0.3	0.2	1	100	10
Sb	0.1	0.01	1	10	1
Te	1	0.5	1	100	10
I	2	0.5	10		
Ce	0.1	0.01	1	1	0.1
Ba	1	0.5	1	100	10
La	0.1	0.01	1	10	1
Ce	0.1	0.01	1	5	0.5
Pr	0.1	0.01	1	2	0.2
Nd	0.1	0.01	1	2	0.2
Sm	0.1	0.01	1	1	0.1
Eu	0.1	0.01	1	0.5	0.05
Gd	0.1	0.01	1	7	0.7
Tb	0.1	0.01	1		
Dy	0.1	0.01	1	1	0.1
Ho	0.1	0.01	1	0.2	0.02
Er	0.1	0.01	1	0.6	0.06
Tm	0.1	0.01	1	0.5	0.05
Yb	0.1	0.01	1	1	0.1
Lu	0.1	0.01	1		
Hf	0.1	0.01	1	1	0.1
Ta	0.1	0.02	1	1	0.1
W	1	0.1	1	100	10
Re	0.01	0.005	0.1	0.5	0.05
Os	1	0.5	1	10	0.1
Ir					10
Pt	1	0.5	1	10	0.1
Au	0.05	0.005	0.1	5	0.1
S.O.Hg	1	0.1	1	3	0.1
Tl	0.1	0.005	1	5	0.5
Pb	1	0.1	1	50	5
Bi	0.8	0.5	1	5	0.5
Th	0.1	0.01	1	0.5	0.05
U	0.1	0.01	1	0.5	0.05

Price \$26.00 \$33.00 \$30.00 \$26.00 \$33.00

Many ore bodies are buried beneath thick sequences of exotic overburden, lake beds, barren bedrock or younger volcanic rocks. Exploration geologists require a cost-effective method of finding blind mineralisation through deep cover. Enzyme LeachSM, and TerraSolSM, and our other selective extraction products provide the means to do this.

Enzyme LeachSM is the most discriminating of the selective analytical extractions in use today. It is capable of detecting extremely subtle geochemical anomalies developed in B-horizon soils over and around blind deposits. Conventional partial leaches, like aqua regia extraction-ICP, extract metals from sulphides, oxides and silicates, providing a partial composition of the overburden. Enzyme LeachSM on the other hand, tends to detect the very subtle trace element signatures that have been added to the soil by elements migrating to the surface through a variety of mechanisms. Trace amounts of amorphous mixed-oxide coatings in soil act as an effective long-term integrating collector of this subtle flux of cations, anions and polar molecules passing through the soil. By selectively removing the amorphous manganese dioxide from these coatings, the mixed oxide coatings collapse, releasing trapped trace elements (the Cohen model). Thus, Enzyme LeachSM provides an effective method of detecting the most subtle signatures of blind deposits in the subsurface without swamping the signal by dissolving the major components of the overburden. At this time, the greatest depth of penetration for Enzyme LeachSM for a mineral deposit is greater than 800 metres.

TerraSolSM is a more aggressive leach that attacks all components of amorphous mixed-oxide coatings and certain crystalline iron and manganese oxides. The oxidant used in the process also dissolves a substantial portion of the Au and platinum group elements (PGE) in the soil sample. TerraSolSM performs best over shallower mineral deposits. The PGE option is particularly useful for revealing platinum group and associated trace element patterns in buried mafic sequences.

Pattern recognition is the key to proper interpretation of Enzyme LeachSM and TerraSolSM data, since anomaly patterns can be different from conventional geochemical data. Selective extractions have been shown to work effectively in both acidic and alkaline environments, and have been used successfully in desert, tropical, glacial and permafrost terrains. In addition to reporting analytical data from samples submitted by the client, ACTLABS offers integrated Enzyme LeachSM Services, turnkey surveys from sample collection, through analysis to interpretation by one of our teams of skilled geochemists.

Preparation and Analysis

After B-horizon soil materials are collected, they are air dried or dried in special rooms kept below 40°C. It is imperative that the samples not be placed in drying ovens as it is impossible to guarantee consistency of drying temperature even in temperature controlled ovens. Samples then undergo the proprietary Enzyme LeachSM and TerraSolSM under rigidly controlled conditions. The resultant solutions are analyzed using a state-of-the-art Perkin Elmer Sciex ELAN 6000 ICP-MS. Discounts may be applicable for larger sampling programs. Sample preparation charges are additional and are listed on page 7.

Fe	1
Ca	0.5
Na	5
Mg	2
K	15
S	10
Al	0.5

Code 7 majors is an option for those wishing data on major elements and S in the leach solution. The request for code 7 MAJ must be made at the same time as the selective extraction. Detection limits shown in ppm.

Price: Code 7 MAJ \$5.00 per sample

Final pH of leach solution \$5.00

Conductivity of leach solution \$5.00

pH and conductivity \$9.00

Other Selective Extractions

ACTLABS has considerable experience at developing and applying a variety of selective and sequential extractions developed both by ACTLABS and also reported in the literature. A selection of these leaches are described below. ACTLABS' team of skilled geochemists can advise on the applicability of each of these selective extractions. Detection limits and available elements vary depending on background levels of metals in the leach solutions and potential interferences.

Aurzyme Leach SM	similar to Enzyme Leach SM , but dissolves native gold. Background levels for most elements are significantly higher than Enzyme Leach SM which may mask some anomalies.
Dizyme Leach SM	will dissolve both amorphous Fe and Mn oxides. Background levels are going to be significantly elevated over Enzyme Leach SM which will mask some low level anomalies.
Sodium Pyrophosphate Leach	for organic rich materials such as humus and peat.
Hydroxylamine Leach (cold)	dissolves majority of Mn and Fe oxides (amorphous+crystalline)
Hydroxylamine Leach (hot)	dissolves nearly all Mn and Fe oxides
Oxalic Acid Leach	dissolves all oxide coatings and a partial attack on weaker silicates
Multielement-BLEG Leach	for weak cyanide extractable metals (good for Au+PGE)
Potassium Iodide+Ascorbic Acid	dissolves all of Fe, Mn and Al oxide coatings (halogens cannot be analyzed)
Water Leach (hot/cold)	dissolves any water soluble component and metals released by hydrolysis of silicates
Pre Wash	removes water soluble components prior to application of leach solution. It is used to remove the high water-soluble salt content of some soils, reducing potential matrix interferences.

Price: \$26.00 per sample for any one of these leaches.

Pre Wash (if requested) \$2.50 per sample

Volume discounts may be applicable. Preparation charges are additional.

Enzyme LeachSM Services - Plotting & Interpretation

Enzyme LeachSM and TerraSolSM anomaly patterns often do not fit conventional geochemical exploration concepts. New customers often need assistance in the techniques of selective extraction data interpretation. Also, we have developed specialized data plotting and contouring techniques that highlight subtle geological features in the subsurface. Public workshops are offered several times each year in different parts of the world. Also, classes can be presented on request in company offices. Consulting and data plotting services are also available to customers. Please contact us for a list of Enzyme LeachSM Certified consultants and service providers we believe can provide the required interpretation. Interpretations, reports and plotting services are available at the following rates.

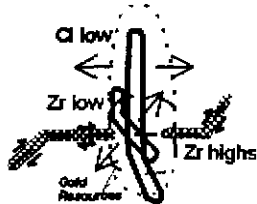
Field work	daily plus expenses	depends on personnel and location
Interpretations	hourly	\$120.00
Computer time to construct plots	hourly	\$80.00
Large clear film or mylar colour plots	max dimension 24-36"	\$30.00
Small clear film or mylar colour plots	max dimension 12-23"	\$20.00
Large paper colour plots	max dimension 24-26"	\$23.00
Small paper plots	max dimension 12-23"	\$15.00
Page-size clear film or mylar plots	max dimension 11"	\$12.50
Page-size paper plots	max dimension 11"	\$4.00
Very large plots	max dimension 36"	by quote

Enzyme LeachSM and other Selective Extraction Turnkey Services

Many mineral exploration companies prefer to have the selective extraction surveys conducted by our Enzyme LeachSM Certified staff. Actlabs offers services ranging from project design and sample collection to presentation of interpretive maps and final exploration reports. Our experienced geologists and geochemists interpret Enzyme LeachSM and TerraSolSM data from soil surveys conducted over a wide variety of base metals, precious metals, and diamond deposits throughout the world. We have a continuing commitment to improving our understanding of Enzyme LeachSM and TerraSolSM signatures and the development and improvement of geochemical models that guide interpretation. Case studies and orientation surveys conducted by our staff foster our knowledge about these geochemical systems. Based on this experience, we select appropriate data treatments in order to resolve subtle features within data sets. In addition to mapping mineralized bodies and altered zones in the subsurface, chemical distributions recognized with the Enzyme LeachSM and TerraSolSM technique can indicate the orientations of dipping or plunging mineral bodies. Geochemical mapping of structures and buried lithologies also can be quite effective when the right processing techniques are applied to Enzyme LeachSM and TerraSolSM data.



First derivative of rubidium data along an important structural direction. By focusing on changes in slope, this technique resolves an oxidation halo around the surface projection of a gold deposit in Nevada.



Structural interpretation of a buried gold deposit based on linear features recognized in Enzyme LeachSM data.



Summary map showing nested oxidation halos ringing surface projection of epithermal silver veins. Summed values of normalized Br, I, As, Mo, W, and Sb are plotted. The contoured and imaged data are truncated at the mean plus one standard deviation so that the patterns in the lower and middle portions of the data are more apparent. Values above the mean plus one standard deviation are indicated by classed solid symbols. The blue dashed line represents an interpreted fault in the subsurface that appears to offset or truncate the mineral body.

Enzyme LeachSM and TerraSolSM Turnkey Services

SURVEY DESIGN

SAMPLE COLLECTION

ENZYME LEACHSM and TERRASOLSM ANALYSIS

PLOTTING OF DATA

INTERPRETIVE MAPS

FINAL EXPLORATION REPORTS

Enzyme Leach Job #: 22897 Report#: 22673

Customer: Ragnar Bruaset

Customer's Job #: RB 01-272

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.

Values = 999999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY

Enhanced Package:

Oxidation Suite:

Sample ID	S.Q.	C	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	S.Q.	Hg	Th	U
RB 01-65S	22500	65	57	86.0	9.2	3	5.2	3.27	-0.5	0.2	0.006	0.567	1.0	1.85	1.13		
RB 01-66S	24000	126	88	196.0	28.0	23	191.0	7.26	-0.5	3.6	0.073	0.474	0.7	1.20	1.25		
RB 01-67S	10700	74	47	99.9	7.7	3	25.2	2.91	-0.5	1.4	0.008	0.089	0.6	1.97	0.95		
RB 01-68S	34200	67	36	63.0	12.5	3	11.0	2.41	-0.5	0.3	-0.005	0.253	1.0	0.85	0.77		
RB 01-69S	22300	58	28	79.9	15.5	1	7.3	2.83	-0.5	0.3	0.006	0.212	1.0	0.99	0.73		
RB 01-70S	13100	72	34	52.2	9.4	1	4.5	5.40	-0.5	-0.1	-0.005	0.331	0.7	1.20	0.76		
RB 01-71S	19200	57	31	67.3	6.0	1	6.4	1.60	-0.5	0.3	-0.005	0.125	1.4	0.99	0.67		
RB 01-72S	19800	302	76	140.0	27.8	8	26.5	11.10	-0.5	2.2	0.047	0.281	0.8	0.62	0.90		
RB 01-73S	18100	48	23	34.3	9.3	3	5.3	2.05	-0.5	-0.1	0.009	0.169	0.3	0.86	0.68		
RB 01-74S	16800	45	22	47.6	5.7	-1	1.5	2.46	-0.5	-0.1	0.009	0.125	0.9	1.38	0.92		
RB 01-75S	21000	61	48	93.8	1020.0	2	3.3	16.10	-0.5	-0.1	0.013	1.250	0.8	2.09	1.01		
RB 01-76S	20400	78	34	111.0	10.6	2	10.7	2.43	-0.5	-0.1	-0.005	0.097	0.7	1.12	0.73		
RB 01-77S	13400	46	27	113.0	9.1	2	3.8	1.53	-0.5	-0.1	-0.005	0.125	0.5	1.33	0.71		
RB 01-78S	12200	46	37	134.0	14.8	2	7.1	2.66	-0.5	0.7	0.007	0.217	0.5	2.10	1.42		
RB 01-79S	21200	236	130	213.0	21.6	7	15.3	6.58	-0.5	0.6	0.022	0.136	0.7	1.46	1.69		
RB 01-80S	23700	139	67	235.0	23.7	10	48.8	17.70	-0.5	1.3	0.024	0.084	0.9	0.93	1.22		
RB 01-81S	26400	126	42	92.2	9.3	3	9.0	3.76	-0.5	-0.1	0.012	0.090	0.7	1.08	0.93		
RB 01-82S	15300	73	36	77.0	15.7	3	6.2	5.81	-0.5	0.3	0.012	-0.005	0.3	1.31	0.80		
RB 01-83S	23500	49	22	64.5	17.4	2	8.6	6.60	-0.5	-0.1	-0.005	0.297	0.8	0.56	0.54		
RB 01-84S	21700	81	31	119.0	10.9	4	22.1	3.52	-0.5	0.5	0.012	0.110	0.7	0.97	0.68		
RB 01-85S	23200	106	45	123.0	13.4	7	317.0	2.35	-0.5	0.8	0.042	0.196	0.4	1.32	0.88		
RB 01-86S	15700	435	110	298.0	28.3	10	637.0	8.86	-0.5	1.7	0.180	0.195	0.5	1.18	3.87		
RB 01-87S	30800	103	42	108.0	11.5	3	24.8	1.98	-0.5	0.2	0.007	0.114	0.8	1.38	1.19		
RB 01-88S	21900	124	67	84.6	10.2	2	10.5	1.67	-0.5	0.2	0.007	0.195	0.6	2.13	1.28		
RB 01-89S	16800	72	34	63.8	3.8	2	2.6	1.13	-0.5	-0.1	0.013	0.242	0.6	1.25	1.28		
RB 01-90S	28000	103	48	89.2	9.2	2	9.5	2.80	-0.5	-0.1	-0.005	0.163	0.4	2.54	1.25		
RB 01-91S	27700	93	47	109.0	14.6	4	31.7	2.07	-0.5	0.9	0.022	0.154	0.8	2.12	1.73		
RB 01-92S	22200	274	113	155.0	13.0	8	12.4	4.34	-0.5	0.2	0.034	0.088	0.5	0.95	1.20		
RB 01-93S	17700	123	88	423.0	17.3	8	28.9	5.56	-0.5	0.6	0.059	0.110	0.5	0.92	1.66		
RB 01-94S	18300	57	30	950.0	3.8	5	10.6	12.50	-0.5	0.4	0.008	0.117	0.5	1.22	0.75		
RB 01-95S	15200	153	161	556.0	26.6	5	42.6	6.89	-0.5	2.1	0.026	0.070	0.7	0.59	0.65		
RB 01-96S	15200	167	88	652.0	26.3	5	26.9	4.61	-0.5	0.9	0.032	0.122	0.4	0.55	0.62		
RB 01-97S	18100	220	73	114.0	6.4	9	34.0	3.01	-0.5	1.5	0.011	0.192	0.5	1.02	0.68		
RB 01-98S	9580	40	24	77.1	9.1	1	9.3	1.98	-0.5	0.4	-0.005	0.107	0.2	1.21	0.73		
RB 01-99S	13300	247	50	300.0	12.0	7	93.0	4.97	-0.5	-0.1	0.087	-0.005	0.4	0.44	0.70		
RB 01-100S	21800	157	55	573.0	21.1	7	430.0	6.42	-0.5	0.8	0.031	-0.005	0.5	0.87	0.80		
RB 01-101S	10200	213	62	278.0	9.6	9	60.6	7.83	-0.5	1.0	0.161	0.029	0.5	0.46	0.91		
RB 01-102S	17800	189	53	239.0	10.5	12	52.1	6.51	-0.5	1.7	0.097	0.298	2.6	0.48	0.83		
RB 01-103S	10600	105	35	373.0	17.0	5	790.0	4.39	-0.5	4.2	0.026	0.632	3.0	0.47	0.42		
RB 01-104S	17900	186	81	219.0	11.8	8	135.0	3.58	-0.5	1.4	0.184	0.345	2.1	0.34	0.74		
RB 01-105S	16300	182	55	158.0	10.7	5	13.9	4.22	-0.5	1.2	0.013	0.209	2.1	1.20	1.34		
RB 01-106S	13000	87	25	184.0	12.1	5	10.1	2.76	-0.5	1.8	0.012	0.353	2.3	1.17	1.04		
RB 01-107S	14300	89	36	189.0	12.9	5	22.9	3.06	-0.5	1.0	0.026	0.241	2.0	2.83	2.93		
RB 01-108S	21600	153	43	241.0	14.9	8	29.7	4.67	-0.5	1.7	0.021	0.445	1.4	0.80	1.01		
RB 01-109S	28800	100	52	21.5	24.5	4	27.6	5.57	-0.5	0.6	0.005	0.650	1.5	1.17	1.10		
RB 01-110S	29400	407	93	198.0	23.9	11	359.0	8.10	-0.5	2.2	0.187	0.281	1.2	0.81	1.38		
RB 01-111S	25300	120	55	179.0	19.8	10	81.5	3.89	-0.5	1.0	0.031	0.255	1.3	1.20	1.14		
RB 01-112S	26700	220	43	199.0	8.5	10	28.8	3.89	-0.5	2.6	0.058	0.395	1.7	1.02	0.56		
RB 01-113S	34100	119	44	96.6	13.8	8	11.7	2.87	-0.5	0.5	0.019	0.122	0.8	1.09	0.88		
RB 01-114S	15800	208	39	76.7	10.1	5	14.1	1.83	-0.5	0.3	0.009	0.159	1.1	1.11	1.21		
RB 01-115S	17200	246	64	276.0	19.9	8	45.8	3.55	-0.5	0.8	0.030	0.199	0.7	1.02	0.92		
RB 01-116S	13600	76	20	227.0	14.1	5	17.9	3.05	-0.5	0.6	0.016	0.196	0.9	0.77	0.94		
RB 01-117S	7890	77	31	189.0	16.0	5	9.2	2.25	-0.5	0.9	-0.005	0.302	0.9	1.06	0.81		
RB 01-118S	3740	122	41	300.0	13.9	3	130.0	2.45	-0.5	1.3	0.085	0.094	1.1	0.34	0.58		
RB 01-119S	15100	160	57	363.0	25.2	8	117.0	2.82	-0.5	0.9	0.068	0.120	0.6	0.59	0.82		

Base Metals:

Co	Ni	Cu	Zn	Pb
23.8	20.1	75.8	1.8	0.3
19.0	16.5	278.0	1.3	0.6
48.9	11.2	68.1	6	0.4
55.1	14.4	63.8	6	0.5
33.1	11.6	38.3	14	0.6
68.0	12.1	32.8	10	0.6
70.0	14.7	24.0	12	0.6
16.4	4.6	184.0	5	0.2
57.3	19.6	52.4	22	0.1
58.1	16.2	56.6	5	0.2
20.8	9.4	80.9	29	0.3
16.3	13.8	60.2	5	-0.1
39.7	13.2	42.0	16	0.1
83.1	50.0	124.0	39	1.7
28.4	33.2	157.0	5	0.3
17.7	19.4	165.0	8	0.3
17.9	18.6	63.6	6	0.2
52.2	20.1	49.1	5	0.4
11.7	20.2	39.5	107	0.4
25.0	14.2	161.0	5	0.2
16.4	12.6	83.7	5	0.1
6.2	19.7	164.0	5	0.1
19.6	16.7	63.4	9	0.3
37.9	20.2	64.7	70	0.7
50.2	16.6	65.5	38	0.5
71.2	44.9	76.0	100	0.8
14.1	15.1	119.0	9	0.6
12.6	7.4	293.0	6	-0.1
15.1	19.6	113.0	5	-0.1
2.5	16.6	256.0	5	0.1
10.2	21.3	135.0	5	-0.1
3.0	8.9	101.0	5	-0.1
1.1	15.9	117.0	5	0.2
22.4	16.3	49.4	5	-0.1
4.9	6.6	53.8	5	0.1
26.6	19.5	140.0	5	0.1
1.6	12.4	120.0	24	0.1
2.3	10.4	77.5	12	-0.1
20.6	22.5	116.0	15	0.4
5.5	13.3	84.4	24	-0.1
12.3	26.9	90.1	104	0.3
6.1	10.3	59.4	6	0.2
7.3	19.0	109.0	5	0.2
4.2	22.0	80.9	5	-0.1
63.4	6.2	184.0	5	0.5
13.0	25.9	208.0	5	0.3
12.1	19.9	109.0	5	0.2
1.7	19.4	134.0	10	0.3
14.0	16.9	65.8	5	0.2
21.9	15.9	73.5	10	0.2
19.5	17.5	89.7	10	-0.1
8.6	14.0	85.2	15	-0.1
3.1	11.6	68.5	72	0.1
2.4	8.9	53.4	98	0.2
3.8	16.1	97.3	14	-0.1

22673RPT XLS

Enzyme Leach Job #: 22897 Report#: 22673

Customer: Ragnar Bruaset

Customer's Job #: RB 01-272

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.

Values > 999999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY

Enhanced Package:

Sample ID	Oxidation Suite:															
	S.Q.	C	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	S.Q.	Hg	Th
RB 01-120S	13800	66	35	102.0	7.4	3	17.4	3.17	0.5	0.6	-0.005	0.115	0.7	1.18	0.86	
RB 01-121S	11400	61	28	83.7	5.5	1	18.7	1.98	-0.5	1.4	0.005	0.162	0.4	1.51	0.90	
RB 01-122S	22300	138	49	85.3	9.0	4	35.8	3.58	-0.5	1.4	0.047	0.080	0.7	1.84	1.65	
RB 01-123S	19900	51	24	54.4	3.1	1	2.2	1.30	-0.5	1.0	0.017	0.111	0.9	1.26	0.86	
RB 01-124S	10600	93	41	69.6	7.2	2	11.9	1.73	-0.5	1.9	-0.005	0.144	0.7	1.52	1.06	
RB 01-125S	6060	55	27	95.3	9.5	2	18.5	1.30	-0.5	2.9	-0.005	0.104	0.8	1.32	0.92	
RB 01-126S	22300	123	112	184.0	27.6	7	209.0	8.19	-0.5	3.0	0.030	0.191	0.4	1.19	2.08	
RB 01-127S	8110	66	27	85.6	9.8	2	15.4	1.87	-0.5	2.0	-0.005	0.108	0.5	1.58	1.07	
RB 01-128S	11200	49	25	93.4	10.5	2	16.3	3.14	-0.5	2.1	0.008	0.031	0.5	1.62	1.00	
RB 01-129S	12600	69	22	102.0	12.5	1	33.6	1.39	-0.5	2.7	-0.005	-0.005	0.5	0.95	0.83	
RB 01-130S	6160	72	31	64.1	8.5	2	18.2	3.33	-0.5	1.9	0.005	0.019	0.6	1.98	2.36	
RB 01-131S	7700	74	34	99.1	25.7	4	23.5	2.75	-0.5	1.9	0.072	0.068	0.6	2.14	2.02	
RB 01-132S	6960	61	43	119.0	16.5	4	28.9	4.96	-0.5	2.1	0.013	0.074	0.3	2.04	2.30	
RB 01-133S	11500	186	53	154.0	16.3	7	70.7	3.81	-0.5	2.1	0.035	0.047	0.6	0.70	1.09	
RB 01-134S	2440	73	37	85.8	12.3	-1	13.9	2.56	-0.5	1.9	-0.005	-0.101	0.4	2.86	1.59	
RB 01-135S	5210	71	27	80.0	9.7	2	29.0	1.11	-0.5	3.6	0.011	-0.005	0.2	1.60	1.08	
RB 01-136S	11900	81	34	86.9	8.0	1	57.2	1.93	-0.5	6.6	0.018	-0.005	0.1	2.60	1.19	
RB 01-137S	5820	56	21	95.3	9.6	1	25.7	1.85	-0.5	4.2	-0.005	0.008	0.3	1.28	1.03	
RB 01-138S	7380	86	31	97.5	12.2	3	104.0	1.46	-0.5	4.6	0.011	-0.005	0.1	1.45	1.36	
RB 01-139S	13200	129	42	132.0	12.3	3	19.9	2.30	-0.5	1.7	0.006	-0.005	0.6	1.35	1.12	
RB 01-140S	6790	67	43	117.0	11.5	3	17.1	2.79	-0.5	2.2	0.015	-0.005	0.4	2.17	1.67	
RB 01-141S	5640	67	46	104.0	7.8	4	12.6	3.57	-0.5	2.4	-0.005	0.446	0.4	2.44	1.41	
RB 01-142S	4730	75	55	70.4	6.8	3	7.5	3.04	-0.5	0.8	-0.005	0.097	-0.1	2.07	1.51	
RB 01-143S	9340	138	64	213.0	16.0	6	39.3	3.62	-0.5	1.9	0.016	0.081	0.2	1.11	1.07	
RB 01-144S	9890	84	37	98.3	11.4	3	68.5	3.59	-0.5	1.7	0.020	0.184	0.5	1.25	1.02	
RB 01-145S	6680	64	40	79.7	11.3	2	39.4	4.60	-0.5	1.6	0.015	0.015	0.5	2.33	2.55	
RB 01-146S	7440	92	41	117.0	16.2	3	57.5	3.77	-0.5	2.3	0.014	-0.005	0.3	3.23	3.24	
RB 01-147S	10900	154	89	164.0	23.0	10	882.0	9.44	-0.5	6.2	0.158	0.019	0.7	1.49	2.31	
RB 01-148S	12500	166	93	269.0	28.8	8	149.0	6.92	-0.5	2.7	0.039	0.112	0.5	0.82	1.38	
RB 01-149S	5770	133	67	325.0	35.4	6	267.0	5.73	-0.5	8.4	0.084	0.044	0.5	1.11	1.07	
RB 01-150S	20000	54	29	50.7	5.7	1	15.9	1.15	-0.5	2.9	0.009	0.212	2.0	0.87	0.54	
RB 01-151S	25600	53	35	110.0	12.2	2	24.8	2.17	0.5	2.9	-0.005	0.533	3.1	1.13	1.24	
RB 01-152S	21000	53	42	91.1	9.2	3	32.3	3.48	-0.5	2.2	0.006	0.592	2.2	1.68	2.21	
RB 01-153S	20200	138	114	145.0	18.1	7	315.0	6.63	-0.5	3.2	0.041	0.350	2.0	1.11	3.84	
RB 01-154S	22000	46	30	95.8	6.6	2	12.5	1.61	0.5	1.4	0.007	0.323	3.1	1.17	0.02	
RB 01-155S	29300	135	62	239.0	20.4	10	92.8	6.09	-0.5	2.2	0.105	0.293	1.4	1.59	4.77	
RB 01-156S	25300	112	81	280.0	28.2	6	117.0	4.66	-0.5	0.7	0.021	0.139	1.2	1.92	1.77	
RB 01-157S	17800	60	44	79.6	14.3	3	13.8	3.39	-0.5	0.9	0.008	0.240	1.1	2.04	1.99	
RB 01-158S	20800	145	57	154.0	20.6	8	87.5	6.69	-0.5	0.9	0.082	0.246	1.1	2.20	1.74	
RB 01-159S	23000	73	42	94.4	11.2	4	14.8	4.43	-0.5	0.9	-0.005	0.204	0.9	1.51	1.27	
RB 01-160S	27700	115	53	135.0	11.7	6	24.3	2.82	-0.5	0.9	0.012	0.179	0.8	1.60	1.48	
RB 01-161S	15700	86	38	71.0	10.0	3	11.4	4.23	0.5	1.2	0.009	0.166	0.9	1.31	1.08	
RB 01-162S	8570	36	28	74.4	11.9	1	18.8	2.16	-0.5	1.4	-0.005	0.213	0.7	1.76	0.88	
RB 01-163S	11800	48	35	87.4	9.7	2	28.8	1.72	-0.5	2.4	0.005	0.289	0.8	1.56	0.97	
RB 01-164S	18900	115	71	98.6	9.7	6	88.2	8.15	-0.5	3.1	0.034	0.248	1.1	0.52	0.90	
RB 01-165S	36200	149	188	197.0	19.3	15	246.0	7.98	-0.5	4.1	0.047	0.583	1.0	1.40	2.48	
RB 01-166S	16500	63	42	81.5	13.7	4	23.5	2.84	-0.5	2.4	0.013	0.211	0.6	1.49	0.97	
RB 01-167S	9550	36	19	101.0	10.6	1	43.4	1.27	-0.5	3.9	0.008	0.270	0.6	1.11	0.76	
RB 01-168S	14200	62	34	40.8	5.4	3	15.8	1.16	-0.5	0.6	0.008	0.075	0.6	1.09	0.74	
RB 01-169S	10600	66	27	62.3	7.8	2	17.5	1.94	-0.5	1.0	0.008	0.133	0.7	1.47	0.83	
RB 01-170S	9660	90	92	150.0	16.5	5	25.3	9.47	-0.5	2.9	0.032	0.174	0.4	2.53	1.74	
RB 01-171S	20700	132	84	208.0	19.4	7	93.5	8.78	-0.5	3.7	0.058	0.130	0.4	2.01	1.87	
RB 01-172S	21200	138	96	194.0	17.8	7	159.0	6.65	-0.5	4.2	0.061	0.093	0.5	1.38	1.34	
RB 01-173S	14100	343	43	249.0	31.6	5	216.0	5.29	-0.5	7.7	0.051	0.164	0.5	2.34	1.20	
RB 01-174S	7870	85	57	89.6	9.7	5	21.4	5.28	-0.5	1.6	0.013	0.210	0.7	1.60	1.24	

Base Metals:					
Co	Ni	Cu	Zn	Pb	
14.0	2.8	63.1	5	0.2	
55.9	25.1	62.1	237	0.2	
22.7	26.0	154.0	63	0.3	
57.4	17.9	62.4	70	0.6	
43.0	13.7	83.7	327	0.4	
63.4	26.3	55.6	172	0.5	
17.4	44.5	408.0	27	0.3	
29.5	13.6	107.0	95	0.6	
62.0	21.4	103.0	117	0.4	
40.3	14.0	86.2	106	0.6	
41.5	20.8	107.0	75	0.4	
42.7	12.5	124.0	48	0.4	
28.0	22.1	164.0	86	0.2	
4.5	9.6	81.3	23	-0.1	
33.3	20.6	86.1	61	0.5	
37.2	17.5	42.1	45	0.6	
81.4	29.0	60.4	113	0.9	
16.3	19.5	45.4	30	0.7	
35.3	21.4	75.5	43	0.6	
11.4	11.2	82.8	18	0.3	
47.6	27.6	122.0	261	0.3	
57.9	29.2	99.5	249	0.5	
50.9	30.7	128.0	424	0.3	
13.1	16.0	151.0	53	0.3	
26.1	20.1	127.0	108	0.3	
56.8	28.4	141.0	108	0.5	
32.8	23.6	114.0	89	1.0	
22.6	24.3	220.0	8	0.4	
4.4	33.1	277.0	617	0.2	
31.7	11.3	157.0	36	0.2	
38.0	33.3	31.7	36	0.5	
13.1	11.7	84.0	5	0.4	
15.6	20.2	133.0	5	0.2	
12.7	20.9	169.0	5	0.2	
20.8	13.8	24.4	12	0.2	
6.0	12.1	144.0	5	0.1	
14.0	12.2	137.0	5	0.2	
15.8	9.3	76.3	5	0.2	
9.7	7.9	83.5	5	0.2	
23.9	24.1	124.0	41	0.6	
6.9	10.8	114.0	5	0.5	
14.3	11.7	103.0	5	0.3	
24.1	9.3	48.6	5	0.2	
42.0	16.0	40.9	5	0.4	
10.5	21.8	123.0	5	0.3	
14.1	31.2	370.0	5	0.1	
24.0	26.2	134.0	5	0.2	
43.1	12.0	31.9	10	0.4	
61.5	18.4	49.0	84	0.6	
36.8	12.7	49.9	42	0.5	
17.0	31.5	379.0	9	0.2	
31.4	31.1	266.0	14	0.2	
18.9	16.6	156.0	15	0.1	
25.5	22.1	189.0	30	0.3	
66.8	21.7	106.0	153	0.1	

22673RPT XLS

Enzyme Leach Job #: 22697 Report#: 22673

Customer: Ragnar Bruaset

Customer's Job #: RB 01-272

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.
 Values > 99999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY.

Enhanced Package:

Oxidation Suite:

Sample ID	S.Q.	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	S.Q.	Hg	Tl	U
RB 01-175S	7980	54	41	109.0	12.2	2	16.1	5.43	-0.5	1.0	0.009	0.167	0.5	1.42	1.15		
RB 01-176S	18500	178	87	202.0	15.5	6	43.3	4.28	-0.5	0.9	0.022	0.261	0.7	1.98	1.83		
RB 01-177S	10700	58	53	83.8	9.5	2	6.0	1.89	-0.5	0.7	0.013	0.156	0.3	1.97	0.96		
RB 01-178S	12100	87	29	140.0	18.5	1	46.8	2.09	-0.5	2.9	0.006	0.109	0.4	2.01	0.90		
RB 01-179S	20700	78	35	58.0	6.6	2	8.7	2.62	-0.5	0.8	0.023	0.075	0.6	2.12	1.11		
RB 01-180S	10400	179	76	138.0	10.6	6	14.0	5.58	-0.5	1.5	0.023	0.125	0.7	1.34	1.27		
RB 01-181S	9070	65	28	79.4	4.9	2	7.2	3.02	-0.5	1.2	0.007	0.078	1.0	0.84	0.65		
RB 01-182S	12300	72	41	122.0	7.0	1	7.0	3.63	-0.5	1.8	0.005	-0.005	0.5	1.63	0.90		
RB 01-183S	7000	52	34	165.0	12.4	3	10.0	2.87	-0.5	2.5	0.014	0.040	0.4	1.04	0.56		
RB 01-184S	17400	62	27	57.1	4.6	2	6.6	1.33	-0.5	0.6	0.007	0.086	0.7	1.06	0.64		
RB 01-185S	7560	166	87	173.0	12.7	7	39.7	7.09	-0.5	2.1	0.130	0.251	0.7	1.69	2.02		
RB 01-186S	8840	53	35	80.9	9.3	3	12.5	3.20	-0.5	2.0	-0.005	0.116	0.5	1.80	1.07		
RB 01-187S	9680	164	73	166.0	9.0	5	19.6	8.29	-0.5	1.4	0.028	0.086	0.8	1.70	1.56		
RB 01-188S	10300	66	39	85.0	7.2	3	19.1	4.41	-0.5	1.1	0.018	0.140	0.8	1.93	1.37		
RB 01-189S	18300	77	46	94.9	10.7	3	14.0	4.62	-0.5	2.0	0.010	0.030	0.6	1.53	1.00		
RB 01-190S	14500	67	40	120.0	10.7	4	80.1	4.67	-0.5	2.3	0.027	0.179	0.7	1.49	1.01		
RB 01-191S	9900	39	16	78.1	10.8	2	25.3	1.28	-0.5	2.0	0.008	0.121	0.7	1.61	0.80		
RB 01-192S	13800	43	23	86.4	7.0	1	16.0	1.51	-0.5	1.7	-0.005	0.006	0.5	1.50	0.78		
RB 01-193S	12500	102	43	55.4	7.6	3	13.0	1.36	-0.5	0.9	-0.005	0.017	0.2	2.08	1.01		
RB 01-194S	25200	183	185	278.0	37.1	12	319.0	8.19	-0.5	1.1	0.069	0.178	0.4	2.85	5.96		
RB 01-195S	13900	25	11	617.0	23.3	3	1250.0	4.18	-0.5	2.6	0.018	0.381	0.7	0.90	0.54		
RB 01-196S	13000	41	28	98.7	8.5	2	21.1	2.88	-0.5	1.0	-0.005	0.171	2.6	1.67	0.79		
RB 01-197S	6940	51	36	72.6	8.3	2	13.3	2.51	-0.5	0.4	-0.005	0.190	3.1	0.81	0.68		
RB 01-198S	18500	49	34	89.0	8.0	-1	7.9	1.68	-0.5	0.4	-0.005	0.144	2.6	0.97	0.58		
RB 01-199S	20200	66	22	84.8	10.0	3	30.9	2.15	-0.5	1.9	0.010	0.677	1.9	1.15	0.67		
RB 01-200S	12200	31	20	95.0	7.4	1	39.0	1.16	-0.5	3.9	-0.005	0.269	2.0	0.70	0.47		
RB 01-201S	7760	75	26	56.1	9.4	1	29.4	6.01	-0.5	3.7	0.008	0.167	0.9	1.35	0.86		
RB 01-202S	13000	59	24	48.3	7.0	3	19.4	1.75	-0.5	0.8	0.016	0.190	1.2	0.82	0.84		
RB 01-203S	15200	78	59	103.0	11.6	5	26.8	5.22	-0.5	1.4	0.036	0.241	1.0	0.61	1.01		
RB 01-204S	13000	48	35	127.0	11.6	1	15.4	1.92	-0.5	2.9	0.005	0.241	1.5	1.13	0.59		
RB 01-205S	13300	45	23	54.0	6.4	2	27.0	1.39	-0.5	1.6	0.007	0.005	0.6	0.76	0.63		
RB 01-206S	8970	37	16	62.5	8.8	1	19.0	1.09	-0.5	1.6	0.008	0.036	0.9	0.71	0.49		
RB 01-207S	13300	110	42	54.0	8.6	2	15.7	1.82	-0.5	1.4	0.014	0.242	0.8	1.43	0.94		
RB 01-208S	14100	89	30	76.6	7.8	3	28.6	2.36	-0.5	1.3	0.011	-0.005	0.8	1.27	1.08		
RB 01-209S	13200	264	138	210.0	19.9	8	45.1	6.49	-0.5	2.2	0.107	0.176	0.7	1.28	1.46		
RB 01-210S	20700	130	67	218.0	17.4	11	74.0	6.50	-0.5	1.8	0.051	0.018	0.6	1.06	1.06		
RB 01-211S	24400	194	87	219.0	13.9	6	87.2	3.39	-0.5	2.0	0.024	0.068	0.6	0.58	0.94		
RB 01-212S	10700	85	20	108.0	5.1	1	23.3	0.56	-0.5	0.7	0.007	0.119	0.6	1.04	0.66		
RB 01-213S	19100	77	32	83.0	12.7	2	15.6	2.47	-0.5	1.3	-0.005	0.105	0.5	0.68	0.83		
RB 01-214S	23900	59	31	70.2	8.0	2	11.1	3.66	-0.5	0.4	-0.005	0.025	0.8	0.74	0.92		
RB 01-215S	16100	88	60	67.1	9.2	1	10.2	4.88	-0.5	0.4	0.007	0.099	0.6	1.14	1.24		
RB 01-216S	18800	65	40	93.2	9.4	4	9.9	4.28	-0.5	0.9	0.009	-0.005	0.5	1.36	1.70		
RB 01-217S	5230	55	41	74.7	7.2	2	8.4	3.60	-0.5	1.0	-0.005	-0.005	0.2	1.98	1.40		
RB 01-218S	5840	45	28	78.8	8.5	2	8.3	1.79	-0.5	1.6	-0.005	-0.005	0.1	1.19	0.68		
RB 01-219S	10600	50	28	58.6	10.3	2	26.2	2.01	-0.5	3.1	0.008	-0.005	0.3	1.23	0.69		
RB 01-220S	13100	47	33	85.0	10.1	-1	20.4	1.88	-0.5	2.1	-0.005	-0.005	0.1	1.31	0.66		
RB 01-221S	18000	58	23	44.4	8.5	-1	4.2	0.92	-0.5	0.4	-0.005	-0.005	0.4	1.25	0.72		
RB 01-222S	8430	44	30	48.0	6.7	-1	4.2	0.85	-0.5	-0.1	-0.005	-0.005	0.6	1.55	0.85		
RB 01-223S	19500	91	45	89.6	5.3	2	9.7	1.91	-0.5	0.4	-0.005	0.152	0.7	1.46	0.97		
RB 01-224S	8310	28	17	29.5	4.0	1	7.0	1.13	-0.5	0.2	-0.005	-0.005	0.5	0.98	0.72		
RB 01-225S	38000	84	54	86.2	9.3	3	40.2	4.03	-0.5	1.0	0.021	-0.005	0.6	1.52	1.26		
RB 01-226S	18300	42	25	35.2	3.0	-1	3.0	3.66	-0.5	0.2	0.012	-0.005	0.6	1.01	0.60		
RB 01-227S	23300	338	51	427.0	9.9	3	12.9	2.47	-0.5	0.6	-0.005	-0.005	0.7	0.44	0.60		
RB 01-228S	15000	148	87	336.0	10.7	8	70.2	4.41	-0.5	2.5	0.073	0.183	0.6	0.52	0.55		
RB 01-229S	17200	51	29	80.5	10.8	1	27.8	1.29	-0.5	0.6	0.006	0.040	0.5	1.09	0.83		

Base Metals:

Co	Ni	Cu	Zn	Pb
31.1	16.2	65.9	177	0.8
11.3	17.1	94.6	50	0.3
22.7	23.1	50.8	240	0.1
32.5	21.9	93.4	144	0.5
56.7	14.8	60.7	152	0.5
19.4	14.2	103.0	14	0.2
28.5	16.2	27.9	97	0.2
92.7	16.5	62.3	133	0.2
46.6	19.7	50.8	54	0.2
63.1	26.4	39.1	205	0.6
12.6	18.9	296.0	31	0.2
58.0	36.7	191.0	145	0.1
18.3	17.9	127.0	52	-0.1
38.4	16.5	87.3	123	0.3
28.8	21.7	94.7	99	0.2
23.0	20.8	91.9	49	0.2
27.5	10.4	38.4	66	0.4
6.7	16.9	57.0	94	0.3
38.0	12.2	58.8	110	0.3
19.4	37.3	268.0	50	0.4
10.1	16.1	98.1	24	0.7
17.1	16.1	41.6	84	0.2
12.8	12.3	54.8	92	0.1
20.5	36.4	35.0	46	-0.1
28.4	17.4	45.2	147	0.3
27.3	15.9	28.3	105	0.4
55.8	18.4	129.0	38	0.5
20.2	16.0	113.0	48	0.4
6.7	12.8	126.0	71	0.1
45.3	22.1	65.6	89	0.4
17.9	16.1	68.6	82	0.3
27.5	9.4	30.3	57	0.5
27.3	13.5	85.0	34	0.4
12.7	13.8	114.0	24	0.2
10.9	26.7	416.0	16	0.1
11.7	19.4	262.0	19	0.1
4.0	11.2	191.0	5	-0.1
17.0	8.9	25.8	5	-0.1
22.5	22.7	87.2	147	0.6
46.2	27.1	80.4	247	0.2
61.4	36.7	77.4	282	0.6
58.0	26.1	80.8	115	0.3
80.7	29.6	109.9	57	1.0
22.5	5.4	34.4	14	0.3
24.4	5.9	51.0	102	0.6
29.8	21.2	41.0	74	0.7
18.3	11.1	81.1	5	0.6
28.9	10.9	70.4	66	0.4
17.6	31.9	237.0	38	0.3
7.0	3.6	57.0	10	0.1
13.5	3.9	42.8	37	0.3

22673RPT.XLS

Enzyme Lasch Job #: 22897 Report#: 22673

Customer: Ragnar Bruaset

Customer's Job #: RB 01-272

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.
 Values = 999999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY.

Enhanced Package:

Oxidation Suite:

Sample ID:	SQ	Cl	Br	I	V	As	Se	Mo	Su	Te	W	Re	Au	SQ	Hg	Th	U
RB 01-230S	11000	27	15	51.3	6.4	-1	5.7	0.87	0.5	0.7	-0.005	-0.005	0.4	0.75	0.48		
RB 01-231S	22900	51	25	73.6	5.4	-1	7.7	0.91	-0.5	0.8	0.005	-0.005	0.6	0.88	0.58		
RB 01-232S	18000	49	29	61.1	7.4	2	14.1	1.33	-0.5	0.8	0.005	-0.005	0.4	1.39	0.90		
RB 01-233S	42200	107	70	107.0	11.5	4	71.3	7.42	-0.5	1.2	0.064	0.048	0.5	0.65	1.36		
RB 01-234S	26800	150	50	165.0	15.8	6	27.3	7.07	-0.5	0.5	0.014	0.069	0.4	1.31	1.35		
RB 01-235S	18600	38	20	47.4	8.5	2	15.0	3.61	-0.5	2.1	-0.005	0.022	0.2	0.49	0.71		
RB 01-236S	18400	56	23	56.6	10.3	2	19.3	2.34	-0.5	1.6	-0.005	0.050	0.4	0.96	0.54		
RB 01-237S	22600	65	23	69.0	8.4	2	14.8	1.71	-0.5	0.8	-0.005	-0.005	0.2	1.91	0.76		
RB 01-238S	21600	71	73	82.3	15.6	2	21.1	3.50	-0.5	0.8	0.009	0.051	-0.1	4.57	6.92		
RB 01-239S	10700	53	40	47.4	8.9	1	9.3	1.44	-0.5	0.7	0.009	-0.005	0.5	1.63	1.44		
RB 01-240S	18600	64	19	70.2	12.6	-1	14.1	1.42	-0.5	1.0	-0.005	-0.005	-0.1	1.40	0.86		
RB 01-241S	18200	40	21	101.0	10.6	2	8.9	1.13	0.5	0.8	-0.005	-0.005	0.4	0.81	0.56		
RB 01-242S	9350	62	35	45.2	6.3	2	13.1	1.39	-0.5	0.5	-0.005	0.720	3.4	0.87	0.67		
RB 01-243S	25500	41	14	51.6	9.2	-1	11.2	1.17	-0.5	0.7	-0.005	0.166	2.4	0.71	0.55		
RB 01-244S	18500	100	29	58.3	10.1	3	20.1	6.13	-0.5	1.8	0.005	0.122	1.4	1.60	1.06		
RB 01-245S	38200	104	37	98.7	10.1	4	98.0	2.70	-0.5	1.0	0.007	0.252	1.3	1.41	1.05		
RB 01-246S	10300	51	26	77.1	7.3	1	17.1	0.99	-0.5	0.6	-0.005	0.138	1.7	1.10	0.71		
RB 01-247S	24900	85	30	34.6	4.8	-1	7.6	1.10	-0.5	0.4	0.007	0.049	1.8	1.50	1.18		
RB 01-248S	29100	61	24	30.5	3.4	2	5.9	1.00	-0.5	-0.1	-0.005	0.303	2.3	0.78	0.73		
RB 01-249S	31700	82	34	45.0	4.0	4	6.0	1.12	-0.5	0.2	-0.005	0.106	2.0	0.83	0.65		
RB 01-250S	23800	34	15	85.8	7.0	-1	6.6	0.90	-0.5	0.6	-0.005	0.070	1.6	0.67	0.52		
RB 01-251S	17000	42	28	48.9	6.3	-1	11.2	0.91	-0.5	0.8	-0.005	0.070	1.2	1.19	0.78		
RB 01-252S	37500	70	50	117.0	6.7	-1	15.5	1.36	-0.5	0.7	0.007	0.098	1.1	1.85	0.99		
RB 01-253S	28400	51	29	80.7	8.8	2	16.6	1.26	-0.5	1.0	-0.005	0.048	1.0	1.50	0.90		
RB 01-254S	22400	74	14	93.4	8.0	1	21.8	1.72	-0.5	2.7	-0.005	0.159	1.2	0.80	0.62		
RB 01-255S	10600	80	23	82.8	6.4	-1	77.5	1.03	0.5	2.4	-0.005	0.025	0.8	1.78	0.93		
RB 01-256S	8980	26	13	55.3	6.3	-1	101.0	0.96	-0.5	2.5	-0.005	0.061	0.6	1.36	0.85		
RB 01-257S	37800	69	23	80.2	9.5	2	56.3	1.96	-0.5	1.5	0.007	0.309	0.8	0.80	1.00		
RB 01-258S	16500	44	22	86.9	8.0	1	20.4	1.05	-0.5	1.3	-0.005	0.085	1.0	1.33	0.77		
RB 01-259S	17900	247	75	217.0	14.3	11	90.3	3.92	-0.5	1.4	0.062	0.037	1.4	0.32	0.71		
RB 01-260S	21300	61	36	91.4	6.8	2	43.6	1.66	-0.5	0.7	-0.005	-0.005	0.5	1.76	1.16		
RB 01-261S	13000	25	14	67.4	5.9	-1	11.1	2.08	-0.5	1.5	-0.005	0.005	0.5	1.15	0.81		
RB 01-262S	11500	28	14	99.9	9.3	-1	21.5	2.10	0.5	2.6	-0.005	0.050	1.2	0.73	0.60		
RB 01-263S	2590	58	24	93.7	6.9	1	23.9	1.54	0.5	2.0	-0.005	0.084	0.5	1.88	1.42		
RB 01-264S	4430	38	15	62.9	6.4	-1	19.4	0.98	-0.5	2.6	-0.005	-0.005	0.4	0.74	0.59		
RB 01-265S	10600	32	18	74.1	4.6	1	10.6	0.79	-0.5	0.8	-0.005	0.005	0.6	0.79	0.50		
RB 01-266S	21700	56	19	104.0	11.6	2	27.4	1.36	-0.5	1.7	-0.005	-0.005	0.5	1.49	0.73		
RB 01-267S	18800	54	31	108.0	5.6	-1	7.2	2.11	-0.5	0.7	-0.005	0.080	0.6	1.05	0.70		
RB 01-268S	12400	52	32	100.0	6.9	1	18.8	1.55	-0.5	2.2	0.008	0.195	0.9	1.03	0.49		
RB 01-269S	8590	71	33	159.0	10.9	7	32.4	2.46	-0.5	2.2	0.014	0.007	0.5	0.68	0.41		
RB 01-270S	22000	57	26	84.0	7.3	-1	13.9	0.89	-0.5	0.7	-0.005	0.065	0.2	1.58	0.81		
RB 01-271S	12900	30	18	70.2	5.4	-1	15.5	0.85	-0.5	0.7	-0.005	0.097	0.5	0.92	0.61		
RB 01-273S	11800	229	48	208.0	18.6	10	174.0	5.28	-0.5	1.1	0.093	0.002	0.8	0.51	0.81		
RB 01-274S	3760	66	26	86.3	9.3	1	9.1	1.36	-0.5	0.8	-0.005	0.120	0.3	1.59	0.77		
RB 01-275S	14600	133	29	149.0	19.7	3	16.9	3.57	0.5	1.2	0.008	0.254	0.7	0.25	0.48		
RB 01-276S	15800	96	39	117.0	7.4	3	35.1	1.68	-0.5	0.5	0.011	0.093	0.7	1.27	0.88		
RB 01-277S	15400	58	43	153.0	12.4	3	15.1	2.92	-0.5	1.0	0.005	0.502	0.4	0.82	1.50		
RB 01-278S	19100	42	30	98.8	7.0	3	15.4	0.86	-0.5	0.6	-0.005	-0.005	0.5	1.07	0.50		
RB 01-279S	6300	44	23	92.2	5.9	-1	9.1	0.99	0.5	0.7	0.007	-0.005	0.2	1.21	0.66		
RB 01-280S	17000	68	34	108.0	7.3	1	7.6	1.13	-0.5	0.7	-0.005	0.082	0.5	1.03	0.71		
RB 01-281S	15100	54	100	94.7	6.0	2	10.9	1.32	-0.5	1.1	0.006	0.043	0.3	1.14	0.85		
RB 01-282S	10600	56	25	98.6	8.2	2	8.1	0.86	-0.5	1.1	-0.005	-0.005	0.3	1.09	0.69		
RB 01-283S	12900	40	24	93.5	5.0	-1	8.3	1.41	-0.5	0.9	-0.005	-0.005	0.9	0.84	0.72		
RB 01-284S	15300	46	42	178.0	12.1	2	35.8	2.17	-0.5	1.3	-0.005	-0.005	0.4	1.51	0.80		
RB 01-285S	20700	61	38	158.0	5.2	-1	18.8	1.44	-0.5	0.7	-0.005	0.127	0.3	1.36	1.04		

Base Metals:

Co	Ni	Cu	Zn	Pb
19.0	7.5	23.6	30	0.3
15.6	10.1	28.4	26	0.2
23.3	13.9	41.2	65	0.7
17.0	20.6	163.0	12	0.2
21.1	24.7	192.0	14	-0.1
51.5	17.9	92.8	9	0.2
36.8	29.5	75.5	14	0.2
29.6	22.6	61.2	5	0.3
44.3	32.0	242.0	58	0.8
58.6	22.4	41.4	30	0.5
16.8	14.0	43.5	5	0.6
11.3	8.1	26.9	5	0.3
48.0	17.2	33.4	11	0.2
26.9	15.1	49.7	9	0.2
53.5	21.7	143.0	5	0.5
23.3	18.1	74.3	8	0.3
19.4	9.2	28.2	5	0.1
43.2	8.0	40.6	24	0.6
40.8	9.3	56.9	31	1.1
47.0	15.6	72.5	110	1.0
29.6	12.9	27.0	15	0.3
24.2	13.1	30.2	19	0.6
14.0	8.1	32.8	5	0.4
30.5	13.7	54.5	11	0.5
18.8	10.7	36.6	5	0.3
24.8	9.3	43.1	5	0.4
42.9	10.2	36.1	6	0.3
16.9	9.6	78.9	5	0.3
41.9	12.7	50.2	19	0.3
10.1	5.9	83.5	7	-0.1
13.1	21.6	55.6	127	0.8
32.0	16.0	43.9	46	0.7
29.3	11.3	33.5	12	0.3
23.8	17.4	59.8	51	0.6
29.2	9.4	31.0	65	0.4
58.7	19.5	50.3	71	0.8
27.8	9.4	105.0	39	1.6
39.6	12.9	39.7	45	0.7
124.0	45.5	27.5	142	0.8
19.7	6.8	60.0	7	0.5
29.8	21.8	32.9	10	0.5
39.9	8.6	17.8	20	0.2
3.8	8.2	65.2	5	0.2
52.9	19.1	34.7	136	0.3
26.7	13.4	122.0	33	0.3
11.0	3.4	46.8	44	0.4
17.4	5.2	76.9	14	0.5
31.1	11.6	31.4	107	-0.1
38.5	19.0	26.8	161	0.1
17.7	10.6	22.6	32	0.3
34.7	14.5	33.4	75	0.6
37.1	12.9	35.6	97	0.3
32.9	12.8	24.0	64	0.5
11.6	10.2	68.2	6	0.4
20.9	20.2	32.8	15	0.9

Enzyme Leach Job #: 22897 Report#: 22673

Customer: Ragnar Bruaset

Customer's Job #: RB 01-272

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.

Values = 999999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY.

Enhanced Package:

Sample ID	S Q	Co	Br	I	V	As	Se	Mn	Sb	Te	W	Re	Au	S Q	Hg	Tl	U
RB 01-286S	13000	103	33	135.0	12.5	2	32.9	157	0.5	1.9	0.005	0.169	-0.1	1.77	0.85		
RB 01-287S	24700	68	39	82.8	8.8	4	27.7	2.14	-0.5	0.2	0.010	-0.005	0.5	1.10	1.80		
RB 01-288S	15700	32	12	78.8	4.9	3	11.3	0.88	-0.5	0.4	-0.005	0.030	0.5	0.53	0.54		
RB 01-289S	23900	118	55	125.0	10.4	8	18.0	2.31	-0.5	0.7	0.008	0.044	0.5	0.79	1.03		
RB 01-290S	23600	103	57	178.0	12.4	14	54.0	2.34	-0.5	1.6	0.130	0.052	0.4	0.49	0.52		
RB 01-291S	16600	63	36	82.2	5.1	3	16.9	2.40	-0.5	-0.1	-0.005	0.195	3.4	0.72	0.79		
RB 01-292S	19000	67	40	83.0	4.5	4	15.7	2.88	-0.5	-0.1	0.005	0.049	2.0	0.46	0.63		
RB 01-293S	15000	252	82	154.0	15.4	12	41.6	4.63	-0.5	-0.1	0.185	0.203	2.3	0.33	0.99		
RB 01-294S	14100	120	60	74.8	8.5	3	31.5	1.93	-0.5	-0.1	0.023	0.144	1.9	1.05	1.21		
RB 01-295S	18200	103	50	111.0	9.4	4	44.2	3.21	-0.5	-0.1	0.030	0.345	1.3	0.91	0.93		
RB 01-296S	8220	45	24	118.0	8.1	3	26.8	1.35	-0.5	-0.1	0.007	0.165	2.0	0.54	0.84		
RB 01-297S	12900	27	15	87.1	9.5	2	23.7	1.32	-0.5	-0.1	-0.005	0.364	2.3	0.52	0.47		
RB 01-298S	13700	54	24	58.7	6.8	-1	19.1	1.58	-0.5	-0.1	-0.005	0.294	1.3	0.59	0.59		
RB 01-299S	7380	31	17	63.9	7.3	1	13.9	0.89	-0.5	-0.1	0.006	0.169	1.0	1.03	0.57		
RB 01-300S	20500	67	36	187.0	7.0	3	14.3	2.02	-0.5	-0.1	-0.005	0.282	1.8	0.81	0.49		
RB 01-301S	21600	68	30	137.0	9.1	1	41.2	0.81	-0.5	-0.1	-0.005	0.178	1.3	1.21	0.71		
RB 01-302S	24000	84	56	131.0	9.8	4	75.1	2.67	-0.5	-0.1	0.050	0.168	1.0	0.70	1.53		
RB 01-303S	24800	71	33	99.9	7.6	2	43.9	0.96	-0.5	-0.1	-0.005	0.186	1.7	1.88	0.96		
RB 01-304S	32800	43	22	121.0	9.6	3	41.1	1.43	-0.5	-0.1	-0.005	-0.005	0.7	1.37	1.05		
RB 01-305S	27400	226	87	356.0	15.8	8	54.7	4.23	-0.5	-0.1	0.041	0.005	0.8	0.69	1.30		
RB 01-306S	37000	217	63	165.0	5.8	15	25.1	2.62	-0.5	1.2	0.063	0.087	0.8	0.88	0.79		
RB 01-307S	30600	71	51	251.0	13.2	8	21.6	1.54	-0.5	-0.1	-0.005	0.102	0.7	1.65	0.47		
RB 01-308S	41400	150	84	132.0	9.7	9	44.7	2.40	-0.5	-0.1	0.028	0.100	0.6	0.92	1.01		
RB 01-309S	28000	30	16	72.6	5.0	1	11.2	0.90	-0.5	-0.1	0.007	-0.005	0.6	1.11	0.80		
RB 01-310S	20200	32	18	59.3	5.2	1	16.3	0.72	-0.5	-0.1	-0.005	0.032	0.5	1.02	0.78		
RB 01-311S	18600	52	26	83.6	6.0	-1	18.2	1.32	-0.5	-0.1	-0.005	0.138	0.9	0.97	0.91		
RB 01-312S	20700	43	11	99.4	6.4	2	16.2	0.73	-0.5	-0.1	0.005	0.122	0.5	0.73	0.63		
RB 01-313S	17500	101	46	127.0	10.0	6	64.9	3.10	-0.5	0.4	0.007	0.050	0.6	0.72	1.30		
RB 01-314S	13400	114	57	145.0	10.4	8	135.0	4.23	-0.5	-0.1	0.061	0.120	0.3	0.88	2.09		
RB 01-315S	13400	37	16	188.0	12.8	1	36.7	3.31	-0.5	-0.1	0.008	0.397	1.2	1.21	1.35		
RB 01-316S	28000	106	41	212.0	10.7	-1	62.2	2.33	-0.5	-0.1	0.006	0.068	0.4	0.73	0.67		

Base Metals:

Co	Ni	Cr	Zn	Pb
72.2	19.8	76.1	81	0.8
9.1	4.9	67.5	15	0.3
10.9	4.8	23.1	41	0.1
10.3	10.7	90.3	5	0.2
9.9	12.8	106.0	10	0.1
6.4	8.4	51.1	10	0.1
8.0	5.5	87.9	15	-0.1
5.6	3.5	85.5	15	-0.1
9.9	7.2	89.5	38	0.3
14.1	15.0	101.0	15	0.3
8.4	5.6	33.5	19	0.1
18.8	8.4	28.3	17	0.2
26.6	1.6	74.7	15	0.5
17.1	6.6	46.8	15	0.3
31.9	15.1	37.3	49	0.5
13.4	14.6	43.1	9	0.5
3.7	9.6	92.6	12	0.3
10.3	8.4	35.8	12	0.4
17.1	12.3	64.1	23	0.4
2.9	13.1	170.0	7	-0.1
1.9	9.1	52.0	15	0.1
18.6	11.7	89.0	15	0.5
11.6	14.5	129.0	15	0.4
23.1	10.5	37.6	11	0.2
14.3	8.9	30.4	48	0.4
10.3	7.1	56.3	21	0.4
11.4	7.6	38.7	8	0.3
7.3	8.4	81.7	15	0.5
6.8	14.3	180.0	5	0.1
23.5	22.6	108.0	15	0.3
14.3	9.8	49.5	18	0.1

Certified By


D. D'Anna, Dipl. T.
ICPMS Technical Manager, Activation Laboratories Ltd.

Date Received: Aug-17-01

Date Reported: Sep-6-01

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Unless otherwise instructed, samples will be disposed of 90 days from the date of this report.

Enzyme Lead
Trace element
Values = 9999

Enhanced Pat. Base Metal - Chalcophile Association Indicators:

Sample ID	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi
RB 01-65S	1.3	0.24	-0.1	0.5	-0.01	-0.2	0.154	19.4
RB 01-66S	0.8	0.12	-0.1	0.9	0.04	0.3	0.033	51.7
RB 01-67S	0.7	0.14	-0.1	0.6	0.01	-0.2	0.223	15.1
RB 01-68S	0.7	0.13	-0.1	1.3	-0.01	-0.2	0.270	17.2
RB 01-69S	0.6	0.22	-0.1	1.5	0.01	-0.2	0.157	16.9
RB 01-70S	0.7	0.09	-0.1	1.3	-0.01	-0.2	0.217	12.7
RB 01-71S	0.9	0.11	-0.1	0.7	-0.01	-0.2	0.172	17.1
RB 01-72S	0.4	0.19	-0.1	0.3	0.01	-0.2	0.059	23.0
RB 01-73S	0.7	0.05	-0.1	0.8	-0.01	0.4	0.155	8.6
RB 01-74S	0.6	0.12	-0.1	0.8	-0.01	-0.2	0.262	14.2
RB 01-75S	0.7	0.17	-0.1	2.8	-0.01	-0.2	0.179	14.8
RB 01-76S	0.9	0.23	-0.1	0.4	-0.01	-0.2	0.113	13.6
RB 01-77S	0.7	0.08	-0.1	0.5	0.01	-0.2	0.081	9.6
RB 01-78S	8.2	0.74	-0.1	0.6	0.03	0.3	0.178	12.5
RB 01-79S	0.5	0.74	-0.1	0.5	0.02	-0.2	0.051	20.5
RB 01-80S	0.6	0.43	-0.1	0.6	-0.01	-0.2	0.086	22.6
RB 01-81S	0.3	0.25	-0.1	0.8	-0.01	-0.2	0.136	16.0
RB 01-82S	1.1	0.28	-0.1	1.1	0.01	-0.2	0.171	9.1
RB 01-83S	1.2	0.25	-0.1	9.6	0.02	-0.2	0.280	11.2
RB 01-84S	0.6	0.36	-0.1	0.7	-0.01	-0.2	0.160	14.8
RB 01-85S	0.4	0.16	-0.1	1.6	-0.01	-0.2	0.062	16.1
RB 01-86S	0.8	0.23	-0.1	1.7	0.01	-0.2	0.052	14.8
RB 01-87S	0.9	0.13	-0.1	0.6	-0.01	-0.2	0.072	11.5
RB 01-88S	1.4	0.36	-0.1	1.6	-0.01	0.3	0.248	11.5
RB 01-89S	1.3	0.28	-0.1	0.8	-0.01	-0.2	0.435	8.8
RB 01-90S	1.5	0.19	-0.1	0.7	0.01	-0.2	0.310	13.7
RB 01-91S	0.6	0.20	-0.1	0.5	0.03	-0.2	0.068	13.6
RB 01-92S	0.6	0.54	-0.1	0.3	0.01	-0.2	0.055	6.3
RB 01-93S	0.4	0.33	-0.1	0.3	-0.01	-0.2	0.068	7.5
RB 01-94S	1.8	0.52	-0.1	0.4	0.02	-0.2	0.187	6.7
RB 01-95S	0.5	0.23	-0.1	0.3	-0.01	-0.2	0.051	8.9
RB 01-96S	0.4	0.26	-0.1	0.1	-0.01	0.2	0.040	6.3
RB 01-97S	0.6	0.34	-0.1	0.3	-0.01	0.3	0.110	10.2
RB 01-98S	0.7	0.16	-0.1	0.4	-0.01	-0.2	0.060	5.0
RB 01-99S	-0.3	0.25	-0.1	0.5	-0.01	-0.2	0.039	7.1
RB 01-100S	0.7	0.28	-0.1	1.2	-0.01	-0.2	0.109	8.4
RB 01-101S	-0.3	0.32	-0.1	0.2	0.01	0.5	0.084	16.8
RB 01-102S	0.7	0.44	-0.1	0.3	0.03	0.5	0.087	45.8
RB 01-103S	1.2	0.24	-0.1	1.8	0.02	0.3	0.088	25.2
RB 01-104S	0.4	0.31	-0.1	0.7	0.01	0.4	0.048	44.6
RB 01-105S	1.7	0.40	-0.1	0.5	0.04	0.4	0.068	34.4
RB 01-106S	1.3	0.15	-0.1	0.3	0.02	0.3	0.046	22.9
RB 01-107S	1.2	0.25	-0.1	0.6	0.02	-0.2	0.108	30.5
RB 01-108S	1.0	0.25	-0.1	0.3	0.03	-0.2	0.067	31.7
RB 01-109S	0.6	0.16	-0.1	1.2	0.03	-0.2	0.285	32.8
RB 01-110S	0.7	0.33	-0.1	1.7	0.03	0.4	0.066	43.0
RB 01-111S	0.9	0.18	-0.1	0.8	0.03	0.2	0.045	36.1
RB 01-112S	0.9	0.39	-0.1	0.4	0.02	-0.2	0.107	26.0
RB 01-113S	0.8	0.30	-0.1	0.8	0.02	0.3	0.099	23.0
RB 01-114S	0.9	0.26	-0.1	0.2	0.02	-0.2	0.066	20.3
RB 01-115S	0.6	0.28	-0.1	0.7	0.03	-0.2	0.027	22.4
RB 01-116S	1.1	0.15	-0.1	0.2	0.02	-0.2	0.047	17.4
RB 01-117S	0.9	0.21	-0.1	0.1	0.02	-0.2	0.048	11.8
RB 01-118S	1.1	0.22	0.1	0.5	-0.01	-0.2	0.054	13.5
RB 01-119S	0.6	0.27	-0.1	0.7	0.02	-0.2	0.043	18.6

High-Field Strength Elements:

Sample ID	Sc	Ti	Sr	Cr	Y	Zr	Nb	Hf	Ta
394	-3	14.60	72.9	1.2	1.73	0.14			
330	-3	12.20	39.9	1.3	0.77	0.15			
402	-3	7.93	52.7	1.1	1.22	0.11			
359	-3	7.51	63.5	0.8	1.35	0.11			
404	-3	7.98	58.6	1.0	1.29	0.15			
331	-3	4.87	52.1	0.8	1.17	0.10			
371	-3	3.79	46.7	1.0	0.94	0.13			
171	-3	14.30	37.4	0.5	0.57	0.15			
238	-3	4.35	22.2	0.5	0.50	0.11			
361	-3	4.96	43.0	0.8	1.01	0.09			
362	-3	11.00	131.0	1.5	2.80	0.13			
428	-3	13.10	49.3	1.4	1.10	0.14			
372	-3	10.10	44.0	1.3	1.07	0.09			
1150	16	19.30	68.7	2.2	1.74	0.15			
385	-3	23.30	120.0	1.4	1.96	0.13			
295	-3	24.90	80.9	1.6	1.27	0.15			
328	-3	12.90	75.3	1.1	1.45	0.13			
464	-3	6.04	60.4	1.2	1.43	0.12			
454	-3	6.19	67.0	0.6	1.48	0.13			
353	-3	13.40	85.1	1.1	1.83	0.16			
400	-3	10.10	58.4	1.4	1.32	0.15			
236	-3	18.00	72.6	0.8	1.70	0.15			
612	-3	14.40	41.9	1.6	0.96	0.16			
807	-3	21.10	82.7	1.5	1.91	0.13			
357	-3	7.23	49.0	0.6	1.12	0.12			
482	-3	14.80	70.5	1.1	1.60	0.14			
359	-3	17.10	93.8	1.2	1.92	0.13			
214	-3	23.10	88.1	0.8	1.67	0.14			
286	-3	19.30	80.7	1.5	1.29	0.15			
526	-3	25.80	89.4	2.8	1.54	0.18			
235	-3	21.70	43.0	0.9	0.64	0.13			
315	-3	26.40	49.9	1.0	0.68	0.14			
686	-3	26.70	76.7	2.2	1.33	0.27			
427	-3	10.50	40.6	1.3	0.99	0.15			
242	-3	14.20	43.2	1.1	0.83	0.13			
310	-3	23.60	57.2	1.1	0.87	0.16			
326	-3	14.30	40.1	1.4	0.72	0.18			
363	-3	14.10	44.6	1.9	0.78	0.32			
328	-3	10.70	17.0	1.0	0.27	0.27			
186	-3	11.30	25.3	0.9	0.46	0.26			
564	-3	18.30	96.4	2.7	1.92	0.24			
422	-3	11.80	58.3	1.6	1.33	0.22			
454	-3	27.60	147.0	2.1	2.80	0.22			
421	-3	18.40	69.1	1.7	1.28	0.21			
122	-3	13.70	61.2	0.3	1.34	0.19			
351	-3	20.70	58.3	1.2	1.03	0.21			
328	-3	18.40	58.5	1.6	1.13	0.24			
604	-3	19.20	65.3	2.2	1.17	0.29			
408	-3	13.50	85.3	1.6	1.84	0.20			
354	-3	14.00	69.8	1.4	1.47	0.16			
220	-3	21.30	61.9	0.8	1.05	0.19			
259	-3	19.20	46.1	0.8	0.94	0.21			
362	-3	14.60	54.7	1.0	1.12	0.20			
260	-3	5.34	15.1	0.6	0.76	0.17			
193	-3	28.70	40.8	0.8	0.66	0.20			

Rare Earth Elements:

	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
7.82	18.20	2.81	13.90	3.38	1.73	2.75	0.54	2.85	
6.33	10.70	2.07	9.22	2.32	0.75	2.13	0.39	1.69	
4.89	13.30	1.78	9.02	1.95	0.68	1.58	0.31	1.72	
3.93	9.94	1.41	6.83	1.49	0.72	1.56	0.27	1.44	
4.27	10.90	1.53	7.05	1.58	0.65	1.45	0.26	1.31	
3.50	11.30	1.13	4.66	1.05	0.56	1.05	0.18	1.00	
2.94	10.70	0.93	3.82	0.79	0.50	0.84	0.14	0.78	
4.48	9.54	1.67	8.62	2.19	0.63	1.98	0.37	2.13	
2.06	7.39	0.76	4.03	0.94	0.55	0.95	0.16	0.97	
3.37	10.30	1.12	4.78	1.12	0.48	1.16	0.18	0.95	
5.50	16.70	2.11	10.00	2.30	0.71	2.22	0.39	1.98	
6.49	13.40	2.52	11.30	2.70	0.96	2.35	0.43	2.27	
5.77	14.80	2.17	9.98	2.49	0.85	2.25	0.42	2.19	
11.20	30.80	4.59	19.90	4.83	1.71	4.43	0.85	3.68	
10.00	18.60	3.76	17.20	4.27	1.31	3.97	0.72	4.09	
9.90	12.20	3.52	16.50	4.10	1.24	3.79	0.73	3.77	
6.09	10.30	2.14	10.40	2.47	0.83	2.07	0.40	2.01	
3.67	10.40	1.46	5.68	1.39	0.60	1.24	0.22	1.26	
3.41	7.77	1.12	5.42	1.43	0.61	1.21	0.21	1.10	
5.57	10.20	2.03	9.97	2.38	0.66	2.18	0.39	2.16	
5.76	9.55	1.88	8.64	2.13	0.71	1.77	0.33	1.85	
6.89	6.60	2.57	12.40	3.19	1.08	2.93	0.52	2.88	
6.14	9.21	2.29	11.00	2.75	1.18	2.44	0.47	2.45	
9.05	17.20	3.16	14.70	3.70	1.13	3.27	0.63	3.52	
3.98	10.50	1.26	5.96	1.49	0.55	1.28	0.26	1.30	
11.50	32.20	3.67	16.30	3.90	1.38	3.20	0.56	2.76	
8.72	16.40	3.07	14.80	3.44	1.05	2.96	0.56	2.88	
7.96	12.80	2.98	14.80	3.74	1.18	3.23	0.65	3.29	
8.29	17.30	3.10	15.30	3.61	1.06	3.12	0.55	3.22	
14.80	26.70	4.68	20.80	4.91	1.38	4.32	0.76	3.85	
9.67	17.40	3.35	15.50	3.68	1.26	3.33	0.61	3.57	
10.80	11.60	3.98	19.70	4.77	1.48	4.20	0.78	4.54	
11.50	6.42	3.94	20.00	4.61	1.50	4.37	0.77	4.34	
4.98	8.43	1.80	9.20	2.15	0.87	1.94	0.34	2.01	
6.79	8.18	2.30	11.20	2.61	0.88	2.21	0.45	2.42	
10.40	21.60	3.95	17.70	4.47	1.30	4.7	0.73	4.22	
7.77	12.40	2.73	13.00	3.07	0.90	2.80	0.47	2.35	
8.38	8.37	2.24	10.50	2.65	0.70	2.07	0.41	2.07	
4.20	8.74	1.41	7.02	1.68	0.56	1.41	0.28	1.47	
4.60	5.88	2.49	7.69	1.97	0.58	1.67	0.31	1.67	
6.44	14.30	2.64	11.90	3.12	0.96	2.81	0.57	2.98	
6.57	11.30	1.98	9.37	2.37	0.77	2.02	0.41	2.14	
10.80	19.50	4.19	20.00	4.96	1.78	4.67	0.85	4.95	
6.80	11.30	2.49	12.20	3.00	0.99	2.73	0.53	2.92	
4.82	11.90	1.82	8.90	2.48	0.96	2.19	0.42	2.29	
8.18	11.20	3.14	15.00	3.97	1.17	3.34	0.70	3.75	
8.65	11.70	3.24	15.00	3.61	1.07	3.06	0.60	3.39	
9.55	8.42	3.13	15.10	3.51	0.89	2.83	0.48	2.69	
5.69	10.50	2.10	10.20	2.47	0.78	1.95	0.40	2.24	
6.34	11.40	2.24	10.40	2.49	0.84	2.26	0.44	2.36	
9.01	18.60	3.37	15.20	3.74	1.07	3.48	0.65	3.71	
7.92	10.30	2.86	13.30	3.16	1.03	3.03	0.61	3.14	
5.40	8.65	2.45	11.30	2.97	0.90	2.67	0.50	2.65	
2.48	3.99	0.79	4.04	0.97	0.31	0.92	0.18	0.91	
9.14	7.49	3.38	16.30	4.05	1.25	3.79	0.67	3.90	

Enzyme Leadi
Trace element
Values = 9999!

Base Metal - Chalcophile Association Indicators:								
Sample ID	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi
RB 01-120S	0.8	0.14	-0.1	0.5	0.02	-0.2	0.056	10.9
RB 01-121S	0.9	0.17	-0.1	0.5	0.01	-0.2	0.086	7.2
RB 01-122S	0.8	0.19	-0.1	0.6	0.02	-0.2	0.074	18.9
RB 01-123S	0.9	0.13	-0.1	1.1	-0.01	-0.2	0.409	10.2
RB 01-124S	0.9	0.16	-0.1	0.4	-0.01	-0.2	0.083	10.4
RB 01-125S	1.4	0.13	-0.1	0.4	0.03	-0.2	0.113	11.1
RB 01-126S	1.4	0.40	-0.1	1.2	0.02	-0.2	0.052	20.0
RB 01-127S	1.2	0.14	-0.1	0.8	-0.01	-0.2	0.071	10.2
RB 01-128S	0.9	0.28	-0.1	0.3	-0.01	-0.2	0.081	7.2
RB 01-129S	0.9	0.09	-0.1	0.7	0.01	-0.2	0.044	11.0
RB 01-130S	1.1	0.21	-0.1	0.6	0.01	-0.2	0.075	9.1
RB 01-131S	1.2	0.28	-0.1	0.7	0.01	-0.2	0.047	9.4
RB 01-132S	0.9	0.20	-0.1	0.5	-0.01	-0.2	0.080	8.2
RB 01-133S	0.4	0.21	-0.1	0.3	-0.01	-0.2	0.053	14.5
RB 01-134S	1.4	0.14	-0.1	0.7	-0.01	-0.2	0.105	7.1
RB 01-135S	0.9	0.09	-0.1	0.4	-0.01	-0.2	0.072	7.2
RB 01-136S	1.0	0.10	-0.1	0.9	0.02	-0.2	0.139	9.0
RB 01-137S	0.8	0.14	-0.1	0.7	0.02	-0.2	0.042	8.5
RB 01-138S	1.2	0.08	-0.1	0.6	0.01	-0.2	0.058	7.9
RB 01-139S	0.6	0.25	-0.1	0.3	-0.01	-0.2	0.079	7.8
RB 01-140S	1.3	0.16	-0.1	0.4	0.02	-0.2	0.080	6.7
RB 01-141S	1.5	0.20	-0.1	0.3	0.02	-0.2	0.078	6.2
RB 01-142S	1.1	0.16	-0.1	0.6	0.01	-0.2	0.176	3.9
RB 01-143S	0.7	0.20	-0.1	0.4	0.02	-0.2	0.071	7.6
RB 01-144S	0.7	0.24	-0.1	0.6	-0.01	-0.2	0.124	9.1
RB 01-145S	1.7	0.28	-0.1	0.5	0.02	-0.2	0.062	6.3
RB 01-146S	1.2	0.31	-0.1	0.4	0.03	-0.2	0.052	9.1
RB 01-147S	0.4	0.32	-0.1	2.9	0.01	-0.2	0.051	11.9
RB 01-148S	0.9	0.30	-0.1	0.9	-0.01	-0.2	0.085	5.2
RB 01-149S	0.4	0.20	-0.1	1.7	-0.01	-0.2	0.082	9.3
RB 01-150S	1.3	0.11	-0.1	2.0	0.02	0.2	0.256	17.8
RB 01-151S	0.6	0.17	-0.1	0.7	0.03	0.4	0.070	42.7
RB 01-152S	0.8	0.19	-0.1	0.7	0.02	0.4	0.053	31.2
RB 01-153S	0.4	0.31	-0.1	1.2	0.04	0.6	0.050	68.2
RB 01-154S	1.0	0.05	-0.1	1.0	0.02	0.3	0.120	20.5
RB 01-155S	0.7	0.22	0.1	0.5	0.03	0.2	0.048	20.8
RB 01-156S	0.5	0.14	-0.1	0.4	0.03	-0.2	0.041	26.0
RB 01-157S	1.0	0.16	-0.1	0.6	0.02	-0.2	0.085	18.0
RB 01-158S	0.7	0.19	-0.1	0.7	0.04	-0.2	0.067	29.6
RB 01-159S	1.3	0.14	-0.1	2.0	0.03	0.4	0.189	13.7
RB 01-160S	0.4	0.26	-0.1	0.6	0.03	0.2	0.065	28.3
RB 01-161S	0.4	0.14	-0.1	0.6	-0.01	-0.2	0.075	12.3
RB 01-162S	0.6	0.10	-0.1	0.5	0.02	-0.2	0.074	9.4
RB 01-163S	0.9	0.07	-0.1	0.6	0.01	-0.2	0.077	14.9
RB 01-164S	-0.3	0.39	-0.1	0.7	0.02	-0.2	0.143	22.1
RB 01-165S	-0.3	0.25	-0.1	1.0	0.02	0.3	0.073	26.2
RB 01-166S	0.8	0.13	-0.1	0.7	0.02	-0.2	0.083	9.7
RB 01-167S	1.1	0.18	-0.1	0.6	0.02	-0.2	0.047	9.0
RB 01-168S	1.2	0.24	-0.1	1.0	0.02	-0.2	0.269	12.8
RB 01-169S	1.1	0.06	-0.1	0.5	0.02	-0.2	0.149	12.5
RB 01-170S	0.6	0.54	-0.1	0.6	0.03	-0.2	0.083	10.8
RB 01-171S	0.7	0.35	-0.1	0.7	0.02	-0.2	0.085	12.2
RB 01-172S	0.4	0.28	-0.1	0.8	0.02	-0.2	0.071	14.7
RB 01-173S	0.6	0.12	-0.1	0.8	0.03	-0.2	0.068	16.6
RB 01-174S	0.6	0.20	-0.1	0.5	0.02	-0.2	0.077	8.8

High-Field Strength Elements:

SO	Tr	Sc	Cr	Y	Zr	Nb	Hf	Ta
341	-3	11.40	47.1	0.9	1.23	0.18		
396	-3	8.32	41.6	1.0	1.00	0.15		
367	6	23.80	80.0	1.2	1.65	0.15		
319	-3	8.12	36.2	0.6	1.05	0.15		
477	-3	15.10	62.9	1.4	1.39	0.14		
854	-3	4.59	43.5	1.9	0.92	0.15		
403	-3	26.80	75.2	1.7	1.21	0.14		
508	-3	12.50	64.5	1.4	1.40	0.14		
459	-3	9.14	41.8	1.0	0.97	0.09		
462	-3	8.75	20.6	1.1	0.47	0.12		
515	-3	15.80	66.3	1.3	1.50	0.10		
448	-3	16.20	70.4	1.0	1.67	0.11		
363	-3	18.40	77.3	1.0	1.79	0.10		
223	-3	7.96	32.7	0.9	0.62	0.13		
823	-3	17.40	109.0	2.4	2.68	0.14		
565	-3	3.58	42.9	1.9	1.05	0.06		
743	-3	7.19	63.2	1.8	1.58	0.06		
781	-3	5.35	40.4	2.1	0.98	0.07		
805	-3	6.78	53.8	2.0	0.97	0.06		
660	-3	15.10	77.7	2.1	1.55	0.10		
539	-3	10.20	71.7	1.2	1.70	0.07		
661	-3	14.10	72.6	1.2	1.78	0.06		
467	-3	14.60	79.4	1.1	1.97	0.04		
272	-3	19.00	80.4	0.9	1.44	0.07		
270	-3	17.10	47.9	0.7	0.99	0.10		
588	-3	19.30	76.4	1.8	1.81	0.10		
731	-3	15.40	84.0	2.4	2.10	0.08		
277	-3	18.50	56.3	1.3	1.17	0.11		
422	-3	22.10	72.0	1.5	1.19	0.14		
176	-3	23.70	60.0	0.5	0.75	0.13		
520	-3	3.19	24.3	1.1	0.80	0.18		
449	-3	14.60	42.0	2.0	0.92	0.21		
426	-3	20.30	69.3	1.6	1.65	0.19		
393	-3	19.10	79.8	2.4	1.65	0.27		
631	-3	4.18	49.0	1.4	1.17	0.21		
308	10	26.80	115.0	1.4	2.38	0.19		
264	13	16.90	116.0	0.8	2.55	0.20		
432	-3	12.90	75.5	1.5	1.81	0.14		
346	-3	16.60	115.0	1.4	2.41	0.16		
608	-3	18.10	94.7	2.0	2.41	0.13		
322	-3	12.00	78.1	1.7	1.65	0.15		
283	-3	21.10	73.0	1.1	1.53	0.19		
311	-3	9.81	61.1	0.7	1.41	0.12		
544	-3	6.37	56.3	1.6	1.42	0.12		
314	-3	7.43	49.3	1.3	0.95	0.18		
376	15	10.60	64.5	1.3	1.17	0.20		
556	-3	22.40	84.6	1.9	1.74	0.12		
549	-3	2.75	23.2	1.7	0.58	0.08		
353	-3	4.28	50.5	0.7	1.09	0.12		
591	-3	5.12	53.3	1.6	1.26	0.12		
572	-3	36.80	162.0	2.9	3.44	0.17		
536	4	33.00	130.0	2.7	2.84	0.12		
391	-3	16.30	75.9	1.5	1.36	0.14		
489	-3	14.70	78.9	1.9	1.74	0.15		
338	-3	16.80	71.8	1.0	1.77	0.14		

Rare Earth Elements:

La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
5.33	10.20	2.00	9.80	2.32	0.74	2.05	0.38	2.21
4.75	12.30	1.75	8.29	2.03	0.79	1.83	0.33	1.77
10.30	24.70	4.29	19.40	4.56	1.46	4.15	0.76	3.77
7.22	16.80	1.95	8.35	1.66	0.98	1.52	0.28	1.48
9.58	25.20	3.46	15.30	3.52	1.25	3.22	0.57	3.13
3.11	8.49	1.05	4.61	1.13	0.46	0.89	0.17	0.87
10.10	13.10	3.66	17.80	4.35	1.29	3.74	0.76	4.02
7.86	17.30	2.80	13.30	3.11	1.00	2.71	0.52	2.56
5.50	14.30	2.07	9.64	2.18	0.82	2.08	0.36	1.92
5.62	14.60	1.65	8.20	2.04	0.72	1.79	0.30	1.51
7.42	16.20	2.67	13.40	3.25	1.13	2.85	0.54	3.07
7.05	15.10	3.13	13.30	3.35	1.16	2.91	0.55	3.02
7.32	16.50	2.87	14.40	3.71	1.13	3.19	0.62	3.45
3.35	7.12	1.24	5.45	1.45	0.46	1.17	0.23	1.35
8.67	18.60	3.29	16.00	3.98	1.45	3.52	0.87	3.55
2.60	6.21	0.82	3.81	0.95	0.36	0.77	0.13	0.79
4.78	13.50	1.48	6.53	1.55	0.64	1.18	0.24	1.35
3.18	6.57	1.05	4.68	1.25	0.54	0.93	0.18	0.99
4.29	12.50	1.39	6.68	1.55	0.59	1.33	0.24	1.41
6.95	13.80	2.51	11.70	2.80	0.89	2.48	0.46	2.42
5.02	12.90	1.89	9.38	2.36	0.92	1.98	0.39	1.89
7.95	21.50	3.34	15.30	3.88	1.23	3.31	0.57	3.11
7.25	20.70	2.91	13.60	3.27	1.09	3.06	0.54	3.01
7.70	11.10	2.78	13.40	3.22	1.07	2.74	0.53	3.07
8.81	18.70	3.07	14.90	3.59	1.11	3.03	0.55	3.10
7.70	16.70	2.98	14.80	3.71	1.34	3.25	0.62	3.55
8.84	23.30	3.35	15.70	3.86	1.27	3.41	0.62	3.35
7.49	19.00	2.63	12.40	2.94	0.91	2.80	0.54	2.65
8.48	9.22	3.16	15.40	3.79	1.18	3.20	0.60	3.55
8.45	14.00	3.12	15.10	3.78	1.02	3.19	0.62	3.43
1.89	5.23	0.66	3.38	0.75	0.45	0.59	0.11	0.60
7.37	8.97	2.47	12.50	2.98	0.93	2.31	0.45	2.47
6.72	9.79	2.68	13.40	3.61	1.20	3.11	0.61	3.43
8.75	14.70	2.97	14.00	3.43	1.00	2.69	0.51	2.74
2.83	6.98	0.86	3.81	0.91	0.43	0.68	0.12	0.80
10.80	19.50	3.84	18.90	4.58	1.34	3.96	0.76	4.21
7.82	18.80	3.09	14.80	3.54	1.03	3.15	0.62	3.34
6.95	15.70	2.61	12.40	3.15	1.03	2.52	0.47	2.87
6.39	16.00	2.20	11.20	2.74	0.82	2.32	0.49	2.83
6.79	11.70	2.75	12.90	3.15	1.14	2.87	0.51	3.07
5.49	10.70	1.95	8.91	2.16	0.74	1.80	0.35	1.98
7.43	12.50	3.08	14.50	3.48	1.17	3.24	0.57	3.32
4.43	9.20	1.60	8.05	2.02	0.77	1.66	0.30	1.85
3.83	9.20	1.23	6.08	1.36	0.65	1.09	0.22	1.40
2.71	5.95	1.08	5.26	1.32	0.51	1.08	0.19	1.12
4.37	7.81	1.64	7.78	1.85	0.66	1.65	0.32	1.75
7.49	12.80	2.95	14.80	3.57	1.25	3.07	0.61	3.38
1.87	4.32	0.53	2.51	0.57	0.29	0.41	0.08	0.49
2.66	7.52	0.87	3.89	0.95	0.43	0.79	0.14	0.81
2.91	7.78	0.95	4.83	1.07	0.48	0.81	0.15	1.03
12.80	16.60	5.03	24.90	6.02	1.89	5.26	1.04	5.73
12.40	21.30	4.52	22.70	5.39	1.66	4.71	0.93	5.02
8.17	10.20	2.88	13.70	3.27	0.96	2.70	0.53	2.69
9.83	22.30	2.97	13.50	3.08	0.85	2.70	0.53	3.03
6.90	16.60	2.58	12.90	3.37	1.00	2.83	0.51	3.03

Enzyme Leadi
Trace element
Values = 9999:

Base Metal - Chalcophile Association Indicators:									
Sample ID	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	
RB 01-175S	0.9	0.25	-0.1	1.0	0.02	-0.2	0.037	7.0	
RB 01-176S	1.0	0.18	-0.1	0.6	0.02	-0.2	0.100	9.4	
RB 01-177S	0.8	0.17	-0.1	0.7	0.02	-0.2	0.113	7.4	
RB 01-178S	0.7	0.14	-0.1	0.6	0.02	-0.2	0.058	13.1	
RB 01-179S	1.0	0.18	-0.1	1.5	-0.01	-0.2	0.255	7.5	
RB 01-180S	0.5	0.27	-0.1	0.5	0.02	-0.2	0.077	9.6	
RB 01-181S	1.0	0.13	-0.1	0.8	0.01	-0.2	0.185	5.7	
RB 01-182S	1.1	0.25	-0.1	1.5	0.02	-0.2	0.191	4.6	
RB 01-183S	0.7	0.21	-0.1	0.6	0.01	-0.2	0.087	5.4	
RB 01-184S	1.4	0.28	-0.1	1.0	0.01	-0.2	0.190	7.2	
RB 01-185S	0.8	0.20	-0.1	0.4	0.02	-0.2	0.108	7.6	
RB 01-186S	0.8	0.22	-0.1	0.6	-0.01	-0.2	0.056	4.6	
RB 01-187S	0.4	0.15	-0.1	0.6	-0.01	0.2	0.110	8.9	
RB 01-188S	0.8	0.21	-0.1	0.7	0.01	-0.2	0.080	8.0	
RB 01-189S	0.6	0.21	-0.1	0.7	-0.01	-0.2	0.049	5.9	
RB 01-190S	0.7	0.26	-0.1	0.6	0.03	-0.2	0.068	8.8	
RB 01-191S	0.7	-0.05	-0.1	0.5	-0.01	-0.2	0.047	5.5	
RB 01-192S	0.4	0.08	-0.1	0.7	0.02	-0.2	0.093	3.8	
RB 01-193S	0.6	0.07	-0.1	0.3	0.01	-0.2	0.112	3.5	
RB 01-194S	0.5	0.28	-0.1	1.2	0.03	-0.2	0.048	8.4	
RB 01-195S	1.2	0.30	-0.1	2.7	0.02	-0.2	0.044	3.5	
RB 01-196S	1.3	0.09	-0.1	0.2	0.01	0.2	0.070	7.1	
RB 01-197S	0.8	0.10	-0.1	0.4	0.03	0.3	0.065	31.0	
RB 01-198S	0.9	0.21	-0.1	0.7	0.03	0.3	0.102	32.5	
RB 01-199S	0.8	0.19	-0.1	0.6	0.03	0.3	0.077	34.0	
RB 01-200S	0.7	0.06	-0.1	0.5	0.02	-0.2	0.047	28.8	
RB 01-201S	0.5	0.20	-0.1	0.6	0.03	-0.2	0.108	32.5	
RB 01-202S	0.8	0.20	-0.1	0.4	0.03	-0.2	0.047	23.7	
RB 01-203S	0.4	0.22	-0.1	0.5	-0.01	-0.2	0.064	19.8	
RB 01-204S	0.5	0.12	-0.1	0.9	0.02	-0.2	0.057	18.1	
RB 01-205S	0.5	0.11	-0.1	0.4	-0.01	-0.2	0.068	14.3	
RB 01-206S	0.6	0.07	-0.1	0.4	0.02	-0.2	0.062	14.5	
RB 01-207S	0.6	0.10	-0.1	0.3	0.01	-0.2	0.098	18.6	
RB 01-208S	0.4	0.10	-0.1	0.4	0.02	-0.2	0.047	20.3	
RB 01-209S	0.7	0.18	-0.1	0.3	0.02	-0.2	0.089	18.2	
RB 01-210S	0.8	0.16	-0.1	0.4	0.02	-0.2	0.064	22.3	
RB 01-211S	0.8	0.08	-0.1	0.3	0.02	-0.2	0.064	18.6	
RB 01-212S	0.8	0.09	-0.1	0.3	0.02	-0.2	0.052	13.0	
RB 01-213S	0.6	0.09	-0.1	0.4	0.02	-0.2	0.089	15.1	
RB 01-214S	0.5	0.19	-0.1	0.5	-0.01	-0.2	0.098	12.5	
RB 01-215S	0.4	0.14	-0.1	0.3	-0.01	-0.2	0.108	10.9	
RB 01-216S	0.9	0.13	0.1	0.3	0.01	-0.2	0.078	8.7	
RB 01-217S	1.0	0.18	-0.1	0.7	0.01	-0.2	0.079	8.0	
RB 01-218S	1.1	0.10	-0.1	0.4	0.01	-0.2	0.073	4.7	
RB 01-219S	0.8	0.07	-0.1	0.9	0.02	-0.2	0.084	9.2	
RB 01-220S	0.8	0.21	-0.1	0.4	0.01	-0.2	0.056	8.9	
RB 01-221S	1.7	0.18	-0.1	0.6	0.02	-0.2	0.171	11.9	
RB 01-222S	1.0	0.11	-0.1	0.2	0.01	-0.2	0.117	5.7	
RB 01-223S	1.1	0.21	-0.1	0.3	0.02	-0.2	0.198	11.8	
RB 01-224S	1.4	0.13	-0.1	1.1	-0.01	-0.2	0.128	8.5	
RB 01-225S	0.8	0.17	-0.1	0.5	0.01	-0.2	0.141	11.6	
RB 01-226S	0.8	0.09	-0.1	1.4	0.01	-0.2	0.064	5.4	
RB 01-227S	0.7	0.24	-0.1	0.5	0.01	-0.2	0.088	6.3	
RB 01-228S	0.4	0.25	-0.1	0.2	0.01	-0.2	0.068	8.0	
RB 01-229S	0.7	0.20	-0.1	0.3	-0.01	-0.2	0.069	6.0	

High-Field Strength Elements:

SQ	Ti	SQ	Cr	Y	Zr	Nb	Hf	Ta
573	-3	13.00	59.6	1.9	1.44	0.13		
620	-3	24.70	108.0	2.4	2.51	0.15		
615	-3	14.40	91.2	1.7	2.21	0.14		
438	-3	13.80	36.9	1.2	0.95	0.10		
657	-3	8.97	95.2	1.4	2.37	0.11		
397	-3	20.70	108.0	2.1	2.10	0.10		
418	-3	4.46	45.3	0.8	0.97	0.10		
627	-3	7.13	82.8	1.2	2.18	0.08		
451	-3	3.95	47.4	1.9	1.03	0.06		
569	-3	4.77	48.4	1.1	1.12	0.10		
241	-3	35.90	96.8	1.1	1.93	0.10		
592	-3	24.30	57.4	1.7	1.29	0.11		
425	-3	24.40	109.0	1.7	2.32	0.15		
517	-3	19.00	64.8	1.6	1.58	0.13		
643	-3	15.90	83.4	1.7	1.57	0.14		
520	-3	16.60	73.3	1.6	1.68	0.13		
465	-3	8.30	64.3	1.4	1.54	0.09		
508	-3	6.03	45.7	0.9	1.35	0.07		
500	-3	10.90	74.7	1.3	1.64	0.05		
363	4	42.50	125.0	2.1	1.95	0.06		
433	-3	12.70	15.0	0.8	0.30	0.08		
532	-3	5.34	50.6	1.4	1.23	0.16		
276	-3	9.75	63.3	1.1	1.41	0.13		
320	-3	9.71	78.4	0.9	1.95	0.17		
371	-3	5.81	31.8	1.2	0.75	0.15		
475	-3	1.95	28.3	1.5	0.52	0.13		
263	-3	5.24	33.9	0.5	0.77	0.06		
306	-3	17.00	37.7	1.0	0.83	0.05		
217	-3	18.60	47.7	0.8	1.04	0.09		
435	-3	5.62	44.1	1.1	0.97	0.07		
482	-3	8.50	39.6	1.3	0.79	0.07		
434	-3	3.15	29.1	1.2	0.55	0.08		
387	-3	20.50	63.9	1.2	1.33	0.07		
332	-3	13.70	58.6	1.4	1.12	0.08		
324	-3	41.10	105.0	1.2	1.74	0.08		
353	-3	21.00	58.3	1.2	1.10	0.12		
304	-3	15.80	44.6	0.7	0.68	0.17		
759	-3	2.80	54.2	3.0	1.41	0.09		
384	5	5.11	20.8	0.9	0.55	0.06		
293	7	10.40	35.0	0.6	0.85	0.05		
274	-3	14.60	58.5	0.5	1.48	0.06		
399	-3	15.40	58.1	0.9	1.41	0.03		
405	-3	12.60	58.0	1.0	1.60	-0.02		
421	-3	8.35	39.9	1.2	0.86	-0.02		
382	-3	4.89	30.2	0.7	0.64	-0.02		
440	-3	8.04	54.6	1.0	1.11	-0.02		
683	-3	5.47	44.0	0.9	1.11	0.03		
366	-3	8.11	61.4	0.8	1.63	0.03		
280	-3	11.10	61.8	0.8	1.51	0.05		
378	-3	3.34	32.8	1.0	0.78	0.02		
495	5	11.90	75.2	1.4	1.77	0.06		
250	-3	11.00	35.9	0.4	0.93	-0.02		
315	-3	44.10	74.7	0.9	0.97	0.02		
313	-3	13.20	46.2	1.1	0.70	0.05		
342	-3	8.08	62.3	1.1	1.18	-0.02		

Rare Earth Elements:

La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
6.63	10.40	2.32	11.70	2.81	1.03	2.29	0.45	2.59
12.20	23.30	4.58	23.20	5.45	1.76	4.80	0.94	5.14
7.97	17.30	3.12	14.70	3.70	1.42	3.18	0.56	2.98
7.07	15.70	2.47	11.80	2.75	0.89	2.37	0.43	2.35
5.90	17.50	1.90	8.01	1.92	0.94	1.62	0.32	1.82
8.65	13.00	3.33	15.80	3.75	1.09	2.98	0.54	3.42
3.05	8.30	0.91	4.13	1.00	0.52	0.86	0.13	0.83
5.28	13.30	1.56	7.11	1.59	0.74	1.34	0.25	1.52
2.82	9.88	0.96	4.27	1.46	0.46	0.86	0.13	0.85
3.41	9.21	0.98	4.64	1.04	0.67	0.97	0.13	0.87
13.60	16.00	4.76	24.80	6.09	1.88	5.22	1.00	5.79
8.40	14.10	3.18	17.00	4.21	1.68	3.64	0.69	3.97
10.40	18.10	3.83	19.10	4.85	1.41	3.96	0.74	4.51
10.20	18.70	3.40	17.10	3.89	1.35	3.98	0.62	3.33
7.82	15.90	2.57	13.30	3.33	1.17	2.78	0.49	2.71
7.09	14.40	2.49	12.50	3.16	1.03	2.64	0.46	2.96
4.30	13.70	1.35	6.57	1.43	0.75	1.33	0.27	1.27
3.47	9.72	1.29	5.86	1.40	0.60	1.13	0.22	1.28
5.97	17.40	2.02	9.39	2.24	0.99	1.97	0.35	1.99
17.10	30.20	6.99	31.60	8.12	2.03	6.77	1.25	7.62
5.24	7.41	1.73	8.90	2.36	0.69	1.90	0.39	2.27
3.09	7.11	1.10	5.44	1.21	0.48	1.18	0.18	1.13
4.77	10.20	1.76	8.16	2.05	0.69	1.74	0.28	1.90
5.63	12.90	2.01	9.31	2.07	0.65	1.71	0.31	1.72
3.70	10.30	1.20	5.45	1.19	0.41	1.07	0.15	1.06
1.53	5.41	0.43	2.19	0.45	0.18	0.39	0.04	0.39
2.81	9.45	1.04	5.53	1.28	0.39	0.99	0.17	1.15
5.76	7.69	2.08	10.30	2.48	0.90	2.33	0.44	2.63
6.44	7.55	2.48	12.30	2.97	0.96	2.74	0.49	2.99
3.00	9.24	1.12	5.28	1.27	0.39	0.89	0.20	1.06
3.83	8.49	1.45	6.82	1.39	0.57	1.26	0.21	1.23
2.14	5.97	0.83	3.25	0.53	0.27	0.56	0.08	0.60
7.68	13.90	3.03	15.40	3.95	1.06	3.17	0.54	3.26
5.67	11.60	2.03	10.00	2.46	0.74	2.04	0.33	2.08
11.00	18.40	4.40	23.00	5.36	1.73	4.76	0.92	5.85
8.57	15.30	2.97	14.60	3.44	1.01	2.88	0.53	3.28
6.44	8.76	2.33	11.20	2.57	0.73	2.34	0.44	2.61
1.66	5.39	0.53	2.66	0.48	0.23	0.47	0.06	0.53
3.19	8.74	1.04	5.48	1.11	0.46	1.08	0.15	1.00
5.32	12.20	1.95	9.28	2.33	0.70	2.00	0.34	1.99
6.44	16.70	2.61	12.80	3.00	0.98	2.41	0.50	2.80
7.72	19.30	3.07	14.60	3.65	1.06	3.22	0.57	3.05
7.45	18.20	2.54	11.60	2.68	1.02	2.51	0.42	2.64
4.21	8.95	1.45	7.63	1.71	0.70	1.44	0.26	1.59
2.87	10.00	0.88	5.07	1.08	0.50	1.25	0.16	1.06
3.97	12.80	1.57	7.81	1.92	0.65	1.46	0.29	1.50
3.35	8.81	0.98	4.65	1.10	0.50	0.91	0.17	1.14
4.08	12.70	1.62	7.60	1.65	0.56	1.46	0.24	1.68
5.60	14.60	1.95	9.01	2.10	0.72	1.99	0.36	2.00
1.92	6.30	0.58	2.98	0.64	0.46	0.59	0.05	0.63
5.38	12.40	1.92	9.22	2.37	0.79	2.03	0.35	2.10
4.53	12.00	1.77	8.66	2.27	0.79	2.01	0.34	2.10
8.98	10.30	3.95	20.50	5.50	1.72	4.79	1.01	6.10
4.83	4.85	1.51	8.61	2.09	0.80	1.74	0.29	1.98
3.94	8.55	1.28	6.04	1.40	0.41	1.17	0.22	1.21

22873RPT.XLS

Enzyme LeacI

Trace element

Values = 9999

Enhanced Pac

Sample ID	Base Metal - Chalcophile Association Indicators:							
	Ga	Ge	Ag	Cd	In	Sn	Ti	B
RB 01-230S	0.6	-0.05	-0.1	0.3	-0.01	-0.2	0.088	4.5
RB 01-231S	0.6	-0.05	-0.1	0.4	-0.01	-0.2	0.038	5.8
RB 01-232S	0.6	0.12	-0.1	0.5	0.01	-0.2	0.089	8.0
RB 01-233S	0.4	0.37	-0.1	0.6	-0.01	-0.2	0.067	10.4
RB 01-234S	0.9	0.29	-0.1	0.5	-0.01	-0.2	0.060	6.6
RB 01-235S	0.5	0.18	-0.1	0.5	-0.01	-0.2	0.082	8.0
RB 01-236S	0.5	0.13	-0.1	0.7	-0.01	-0.2	0.098	6.2
RB 01-237S	0.7	0.10	-0.1	0.6	0.01	-0.2	0.079	5.7
RB 01-238S	1.6	0.17	-0.1	0.6	0.03	-0.2	0.086	8.0
RB 01-239S	0.7	-0.05	-0.1	0.4	-0.01	-0.2	0.122	5.2
RB 01-240S	0.7	-0.05	-0.1	0.4	0.02	-0.2	0.027	7.5
RB 01-241S	0.7	0.12	-0.1	0.7	0.01	-0.2	0.041	5.2
RB 01-242S	0.9	0.14	0.1	0.4	0.04	-0.2	0.150	20.9
RB 01-243S	0.6	0.10	0.3	0.4	0.08	-0.2	0.020	33.5
RB 01-244S	0.8	0.09	0.2	0.7	0.08	0.2	0.059	42.8
RB 01-245S	1.4	0.27	0.1	0.8	0.08	-0.2	0.083	48.2
RB 01-246S	1.0	0.06	-0.1	0.5	0.03	-0.2	0.062	22.9
RB 01-247S	0.9	0.20	-0.1	1.3	0.05	-0.2	0.091	32.8
RB 01-248S	1.4	0.22	-0.1	1.5	0.04	-0.2	0.050	31.5
RB 01-249S	2.2	0.21	-0.1	1.3	0.03	-0.2	0.036	24.2
RB 01-250S	0.7	0.15	-0.1	0.6	0.03	-0.2	0.081	11.5
RB 01-251S	0.7	0.10	-0.1	0.5	0.04	-0.2	0.108	16.8
RB 01-252S	0.7	0.11	-0.1	0.5	0.03	-0.2	0.124	17.0
RB 01-253S	1.0	0.10	-0.1	0.5	0.03	-0.2	0.122	13.5
RB 01-254S	0.5	0.07	-0.1	0.6	0.02	-0.2	0.083	12.2
RB 01-255S	0.8	-0.05	-0.1	0.3	0.03	-0.2	0.017	15.4
RB 01-256S	1.1	-0.05	-0.1	0.5	0.01	-0.2	0.099	12.2
RB 01-257S	0.7	0.21	-0.1	0.6	0.02	-0.2	0.062	18.9
RB 01-258S	0.7	-0.05	-0.1	0.4	0.02	0.4	0.094	12.0
RB 01-259S	0.7	0.32	-0.1	0.3	0.02	-0.2	0.085	20.1
RB 01-260S	0.5	0.12	-0.1	0.7	0.03	-0.2	0.050	13.7
RB 01-261S	0.8	0.19	-0.1	0.5	0.02	-0.2	0.064	11.3
RB 01-262S	0.9	0.08	-0.1	0.5	0.01	-0.2	0.036	7.8
RB 01-263S	1.3	0.16	-0.1	0.5	0.03	-0.2	0.057	11.3
RB 01-264S	1.1	0.10	-0.1	0.4	0.02	-0.2	0.038	8.2
RB 01-265S	2.2	0.19	-0.1	0.4	0.02	-0.2	0.275	10.6
RB 01-266S	1.8	0.19	-0.1	1.2	0.04	-0.2	0.068	13.4
RB 01-267S	1.6	0.25	-0.1	1.0	0.01	-0.2	0.169	7.1
RB 01-268S	3.0	-0.05	0.1	2.0	0.02	-0.2	0.212	10.0
RB 01-269S	0.5	0.13	-0.1	0.6	0.02	-0.2	0.054	16.7
RB 01-270S	1.5	0.06	0.1	0.6	0.02	-0.2	0.109	5.5
RB 01-271S	0.8	0.05	-0.1	0.2	0.01	-0.2	0.049	5.0
RB 01-273S	0.5	0.24	-0.1	0.7	0.02	-0.2	0.030	16.6
RB 01-274S	1.1	0.15	-0.1	0.4	0.01	-0.2	0.083	4.7
RB 01-275S	0.6	0.93	-0.1	0.8	0.02	-0.2	0.113	12.1
RB 01-276S	0.9	0.30	-0.1	0.3	0.02	-0.2	0.162	9.8
RB 01-277S	1.2	0.16	-0.1	0.4	0.02	-0.2	0.083	13.3
RB 01-278S	1.0	0.05	-0.1	0.6	0.01	0.7	0.050	4.5
RB 01-279S	1.1	0.06	-0.1	0.7	0.01	-0.2	0.089	3.6
RB 01-280S	0.9	0.14	0.1	0.5	0.02	-0.2	0.105	4.8
RB 01-281S	1.2	0.14	-0.1	0.5	0.02	-0.2	0.118	5.1
RB 01-282S	1.5	-0.05	-0.1	0.7	0.01	-0.2	0.055	3.2
RB 01-283S	1.1	0.14	-0.1	0.5	-0.01	-0.2	0.146	5.0
RB 01-284S	0.8	0.25	-0.1	0.4	0.02	-0.2	0.051	7.1
RB 01-285S	2.4	0.24	-0.1	0.5	0.03	-0.2	0.142	7.3

High-Field Strength Elements:

Sample ID	Sc	Ti	Y	Zr	Hf	Ta
RB 01-230S	319	-3	3.49	32.7	0.6	0.67
RB 01-231S	471	-3	3.21	34.8	1.0	0.90
RB 01-232S	448	-3	4.49	53.7	1.1	1.31
RB 01-233S	238	-3	15.10	48.7	0.6	0.96
RB 01-234S	334	3	31.30	120.0	1.1	2.22
RB 01-235S	191	-3	9.43	17.6	0.3	0.36
RB 01-236S	405	-3	3.99	25.8	0.7	0.54
RB 01-237S	557	-3	11.40	42.0	1.3	1.00
RB 01-238S	871	7	21.30	108.0	2.7	2.88
RB 01-239S	493	-3	3.69	52.2	1.4	1.75
RB 01-240S	1350	-3	5.27	29.1	1.7	0.68
RB 01-241S	393	-3	5.19	31.6	1.3	0.84
RB 01-242S	323	-3	2.81	32.2	1.0	0.73
RB 01-243S	305	-3	2.94	15.9	0.7	0.38
RB 01-244S	451	-3	7.66	24.9	0.8	0.64
RB 01-245S	867	-3	6.91	44.6	1.9	0.98
RB 01-246S	472	-3	3.20	38.7	1.4	0.85
RB 01-247S	400	-3	5.21	35.3	0.8	0.97
RB 01-248S	313	-3	3.15	43.8	0.6	0.86
RB 01-249S	457	-3	3.70	48.9	0.7	0.98
RB 01-250S	455	-3	1.72	27.1	1.1	0.83
RB 01-251S	410	-3	3.62	42.0	1.3	0.96
RB 01-252S	741	-3	8.00	78.4	2.0	1.68
RB 01-253S	511	-3	11.00	61.4	1.3	1.43
RB 01-254S	371	-3	6.20	43.6	1.3	0.80
RB 01-255S	545	3	5.01	49.0	1.5	1.10
RB 01-256S	471	-3	4.73	45.6	1.2	0.92
RB 01-257S	371	-3	13.40	41.8	1.0	0.80
RB 01-258S	440	-3	5.74	38.2	0.9	0.75
RB 01-259S	189	-3	8.37	27.6	0.6	0.35
RB 01-260S	620	-3	8.98	72.8	2.6	1.50
RB 01-261S	389	-3	4.37	21.6	0.7	0.48
RB 01-262S	455	-3	2.81	19.1	0.9	0.35
RB 01-263S	764	-3	13.20	67.3	1.9	1.53
RB 01-264S	734	-3	2.34	18.4	1.1	0.42
RB 01-265S	1170	-3	2.37	48.0	2.1	1.05
RB 01-266S	738	-3	6.32	49.2	1.5	1.12
RB 01-267S	684	-3	5.74	67.4	1.2	1.75
RB 01-268S	1290	-3	3.48	51.9	2.0	1.33
RB 01-269S	267	-3	7.81	35.1	0.8	0.53
RB 01-270S	844	-3	7.91	60.5	1.5	1.47
RB 01-271S	639	-3	1.82	29.5	1.1	0.74
RB 01-273S	268	-3	12.00	34.8	0.8	0.62
RB 01-274S	485	-3	4.28	48.9	1.2	1.02
RB 01-275S	179	-3	12.50	18.9	0.3	0.24
RB 01-276S	320	-3	7.72	57.4	0.9	1.18
RB 01-277S	516	-3	10.50	61.3	1.6	1.14
RB 01-278S	526	-3	4.89	34.4	1.2	0.86
RB 01-279S	586	-3	3.51	38.7	1.4	0.78
RB 01-280S	647	-3	3.97	54.6	1.4	1.27
RB 01-281S	749	-3	8.84	64.9	1.4	1.34
RB 01-282S	700	-3	6.00	44.0	1.3	1.07
RB 01-283S	615	-3	4.76	40.0	0.9	0.92
RB 01-284S	401	-3	17.40	95.6	1.7	1.71
RB 01-285S	1440	-3	7.10	78.4	3.1	1.70

Rare Earth Elements:

La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
2.12	6.56	0.66	3.17	0.71	0.37	0.57	0.09	0.64
2.42	7.54	0.71	3.36	0.74	0.36	0.66	0.09	0.68
3.25	11.50	0.98	4.55	1.00	0.44	0.83	0.15	0.69
5.46	9.75	2.07	10.10	2.37	0.76	1.98	0.39	2.44
8.98	15.70	3.89	19.00	4.68	1.52	4.30	0.86	4.70
3.92	7.39	1.38	7.19	1.79	0.55	1.42	0.23	1.68
2.59	7.10	0.88	4.20	0.85	0.31	0.80	0.11	0.85
5.55	11.80	2.12	10.00	2.11	0.80	1.98	0.34	2.32
7.55	25.60	3.30	17.10	4.45	1.38	3.72	0.71	4.27
2.76	10.60	0.86	3.94	0.85	0.39	0.60	0.10	0.70
2.70	8.45	1.03	5.20	1.14	0.46	1.06	0.17	1.32
2.68	5.52	0.83	4.22	1.13	0.33	0.79	0.12	0.89
1.81	4.52	0.67	2.51	0.72	0.42	0.61	0.13	0.56
1.84	4.83	0.57	2.71	0.67	0.25	0.53	0.10	0.49
5.28	13.00	1.67	8.58	1.85	0.63	1.56	0.25	1.65
4.27	12.20	1.53	7.03	1.67	0.53	1.31	0.21	1.35
2.37	6.68	0.73	3.57	0.82	0.27	0.57	0.08	0.66
2.83	6.88	0.88	4.17	1.02	0.41	0.87	0.14	1.05
2.18	5.28	0.63	2.81	0.61	0.24	0.60	0.07	0.57
2.52	5.92	0.65	3.33	0.61	0.23	0.55	0.07	0.59
1.38	4.70	0.38	1.96	0.40	0.32	0.31	0.04	0.34
2.42	8.62	0.79	3.49	0.77	0.32	0.62	0.07	0.71
4.56	13.10	1.75	7.77	1.83	0.53	1.49	0.25	1.66
5.72	16.40	2.00	9.59	2.24	0.86	1.92	0.33	2.18
3.24	8.81	1.07	5.05	1.20	0.45	1.01	0.16	1.03
3.97	13.60	1.32	5.55	1.13	0.36	0.97	0.17	1.15
2.65	9.77	0.86	4.42	0.99	0.37	0.84	0.11	0.83
5.71	9.58	1.95	9.93	2.30	0.76	2.06	0.32	2.12
3.36	11.40	1.28	6.26	1.31	0.42	1.18	0.19	1.25
3.45	11.50	1.24	5.50	1.38	0.44	1.29	0.19	1.21
4.46	9.81	1.61	7.67	1.88	0.58	1.37	0.21	1.52
2.65	7.95	0.82	4.05	0.94	0.40	0.77	0.14	0.93
1.73	4.61	0.45	2.46	0.49	0.26	0.44	0.05	0.55
5.66	11.30	1.95	9.41	2.20	0.76	2.03	0.36	2.30
1.75	4.05	0.43	2.25	0.46	0.21	0.38	0.04	0.49
1.53	6.79	0.39	2.02	0.47	0.17	0.38	0.02	0.36
3.39	11.90	1.07	5.21	1.33	0.60	1.10	0.17	1.13
3.62	10.30	1.21	5.56	1.17	0.46	1.02	0.16	1.03
2.26	8.26	0.59	3.07	0.53	0.41	0.63	0.09	0.61
4.03	17.50	1.40	6.46	1.26	0.40	1.22	0.23	1.48
4.56	12.50	1.54	7.12	1.60	0.61	1.56	0.24	1.46
1.72	5.16	0.41	2.13	0.43	0.23	0.38	0.01	0.44
4.99	7.59	1.67	8.07	1.78	0.64	1.75	0.29	1.62
3.07	12.80	0.92	5.03	1.04	0.35	0.69	0.14	1.00
4.97	7.93	1.65	8.60	2.30	0.76	1.74	0.27	1.79
4.27	10.50	1.33	6.62	1.51	0.42	1.30	0.22	1.36
4.46	7.83	1.46	7.50	1.74	0.65	1.43	0.26	1.71
3.77	12.20	1.07	5.08	1.05	0.48	1.12	0.13	1.08
2.11	8.29	0.76	4.04	0.70	0.39	0.75	0.29	0.73
3.03	9.44	0.81	4.04	0.95	0.31	0.72	0.10	0.73
4.98	15.70	1.61	7.97	1.81	0.72	1.48	0.27	1.48
3.92	11.90	1.26	6.13	1.41	0.61	1.06	0.18	1.30
3.73	10.80	1.05	4.71	1.03	0.48	0.69	0.17	1.12
8.19	20.20	3.04	13.60	3.29	0.95	2.99	0.54	3.07
4.64	10.10	1.32	6.03	1.23	0.52	1.14	0.17	1.11

Enzyme Leach

Trace element

Values = 9999!

Base Metal - Chalcophile Association Indicators:									
Sample ID	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	
RB 01-286S	2.1	0.20	0.1	0.3	0.02	-0.2	0.068	5.9	
RB 01-287S	0.4	0.22	-0.1	0.3	0.02	-0.2	0.033	5.5	
RB 01-288S	0.7	-0.05	-0.1	0.1	-0.01	-0.2	0.067	2.8	
RB 01-289S	0.6	0.16	-0.1	0.2	0.02	-0.2	0.052	6.3	
RB 01-290S	0.5	0.15	-0.1	0.3	0.02	-0.2	0.024	6.7	
RB 01-291S	0.5	0.18	0.2	0.5	0.03	0.3	0.044	23.8	
RB 01-292S	0.4	0.18	0.2	0.1	0.03	0.4	0.014	24.2	
RB 01-293S	0.6	0.16	0.4	0.4	0.06	-0.2	0.038	59.6	
RB 01-294S	0.9	0.14	-0.1	0.4	0.11	-0.2	0.057	72.4	
RB 01-295S	1.0	0.21	-0.1	0.4	0.05	-0.2	0.017	41.8	
RB 01-296S	0.9	0.15	-0.1	0.2	0.03	-0.2	0.033	22.5	
RB 01-297S	1.0	-0.05	-0.1	-0.1	0.03	-0.2	0.029	20.1	
RB 01-298S	0.8	0.06	0.1	0.4	0.03	-0.2	0.071	28.4	
RB 01-299S	1.0	0.07	-0.1	0.4	0.04	-0.2	0.054	15.6	
RB 01-300S	2.0	0.24	-0.1	0.4	0.02	-0.2	0.118	20.3	
RB 01-301S	1.3	0.08	-0.1	0.2	0.04	-0.2	0.030	21.5	
RB 01-302S	0.9	0.23	-0.1	0.5	0.02	-0.2	0.030	35.4	
RB 01-303S	1.0	-0.05	-0.1	0.3	0.02	-0.2	0.063	15.2	
RB 01-304S	1.0	0.29	-0.1	0.5	0.03	-0.2	0.015	14.6	
RB 01-305S	1.1	0.27	-0.1	0.3	0.02	-0.2	0.050	14.3	
RB 01-306S	1.1	0.33	-0.1	0.4	0.03	0.2	0.101	23.1	
RB 01-307S	1.0	0.25	-0.1	0.6	0.02	-0.2	0.032	18.2	
RB 01-308S	0.9	0.33	-0.1	0.5	0.05	-0.2	0.023	22.8	
RB 01-309S	1.4	0.18	-0.1	0.2	-0.01	-0.2	0.028	6.8	
RB 01-310S	0.8	0.12	-0.1	0.2	0.02	-0.2	0.035	9.1	
RB 01-311S	0.8	0.07	0.1	0.3	0.03	-0.2	0.023	13.9	
RB 01-312S	0.6	0.05	-0.1	0.2	0.02	0.2	0.011	12.5	
RB 01-313S	0.5	0.19	-0.1	0.3	0.02	-0.2	0.043	20.8	
RB 01-314S	0.7	-0.05	-0.1	0.5	0.01	-0.2	0.066	13.5	
RB 01-315S	0.8	0.15	-0.1	0.3	0.02	-0.2	0.033	9.7	
RB 01-316S	1.0	0.33	-0.1	0.7	0.03	0.2	0.109	11.5	

High-Field Strength Elements:

Sr	Ti	Sr	Cr	Y	Zr	Nb	Hf	Ta
662	-3	4.61	68.0	1.9	1.46	-0.02		
340	-3	10.40	67.1	1.1	1.36	-0.02		
553	-3	2.88	16.7	0.7	0.25	-0.02		
331	-3	16.90	70.5	1.2	1.27	-0.02		
264	-3	16.00	45.4	1.0	0.77	-0.02		
243	-3	16.20	48.4	1.1	0.74	0.11		
225	-3	14.10	39.8	1.0	0.73	0.10		
148	-3	12.50	28.7	0.6	0.34	0.12		
272	-3	13.20	39.5	1.2	0.79	0.10		
253	-3	17.00	39.4	1.0	0.66	0.07		
312	-3	6.71	36.9	1.2	0.57	0.07		
310	-3	4.78	49.7	0.9	0.88	0.09		
166	-3	3.95	21.9	0.5	0.32	0.06		
430	-3	3.87	20.4	0.7	0.33	-0.02		
457	-3	6.00	34.1	0.7	0.49	-0.02		
701	-3	10.60	56.1	2.1	0.93	-0.02		
280	-3	14.30	49.4	1.0	0.77	-0.02		
702	-3	10.80	99.3	2.5	1.71	-0.02		
437	-3	12.90	60.8	1.6	1.05	-0.02		
227	-3	34.30	70.3	0.7	1.00	-0.02		
509	-3	8.21	52.4	2.1	0.79	-0.02		
602	-3	22.90	84.3	2.4	1.32	-0.02		
263	-3	28.30	48.1	0.8	0.89	-0.02		
463	-3	7.97	34.2	0.9	0.73	0.02		
518	-3	6.24	35.2	1.3	0.65	-0.02		
326	-3	12.60	42.8	0.9	0.72	-0.02		
449	-3	3.27	25.1	1.1	0.42	-0.02		
265	-3	12.00	64.0	1.4	0.98	-0.02		
242	-3	18.90	76.6	0.8	0.91	-0.02		
457	-3	10.10	52.5	1.7	0.83	-0.02		
432	-3	4.74	59.5	1.1	0.69	-0.02		

Rare Earth Elements:

La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
2.70	10.80	0.81	4.32	0.98	0.40	0.83	0.12	0.81
4.52	10.80	1.68	8.75	2.30	0.63	1.58	0.27	1.94
1.65	4.74	0.51	2.90	0.61	0.21	0.54	0.05	0.57
6.30	10.60	2.39	12.10	2.82	0.79	2.47	0.50	2.81
6.88	9.86	2.56	11.70	2.74	0.78	2.32	0.40	2.43
3.93	6.33	1.77	9.49	2.41	0.88	2.14	0.48	2.50
4.25	7.83	1.64	8.83	2.12	0.71	1.87	0.36	2.30
4.07	6.36	1.41	6.61	1.80	0.55	1.46	0.27	1.74
5.13	11.40	1.83	8.92	1.93	0.74	1.90	0.31	1.96
6.12	11.50	2.16	10.60	2.70	0.83	2.39	0.38	2.40
2.71	5.74	0.97	4.80	1.15	0.34	0.94	0.12	0.85
2.75	8.53	0.90	4.39	0.99	0.32	0.95	0.10	0.81
2.38	6.86	0.58	3.63	0.87	0.29	0.63	0.09	0.81
2.98	7.62	0.85	4.09	0.82	0.27	0.83	0.09	0.66
4.06	12.60	1.18	5.38	1.24	0.35	1.11	0.15	1.07
5.37	12.50	1.68	8.24	1.92	0.58	1.61	0.27	1.67
5.67	10.20	1.93	8.90	2.10	0.61	2.09	0.30	2.17
4.97	12.60	1.59	7.51	1.81	0.61	1.66	0.28	1.49
4.75	12.40	1.71	8.13	1.98	0.50	1.67	0.27	1.88
11.90	14.60	4.26	21.30	5.83	1.54	5.19	0.90	5.70
4.50	7.16	1.37	6.51	1.39	0.39	1.37	0.16	1.12
12.50	29.50	4.90	21.90	4.83	1.46	4.39	0.81	4.12
10.60	19.50	4.02	20.20	4.97	1.38	4.14	0.79	4.70
4.25	12.20	1.40	7.18	1.68	0.52	1.53	0.21	1.57
4.71	11.00	1.28	5.91	1.33	0.41	1.32	0.16	1.22
5.16	9.71	1.94	9.78	2.11	0.75	2.09	0.36	2.19
2.05	5.30	0.55	3.02	0.62	0.21	0.53	0.02	0.63
6.04	7.21	2.08	9.27	2.01	0.54	1.79	0.30	1.94
6.69	9.80	2.32	11.80	2.77	0.75	2.51	0.39	2.70
3.52	8.29	1.45	7.51	1.87	0.61	1.67	0.28	1.79
3.51	7.58	1.10	4.81	0.91	0.34	0.77	0.09	0.85

Sample ID	Ho	Er	Tm	Yb	Lu
RB 01-65S	0.60	1.60	0.25	1.71	0.24
RB 01-66S	0.42	1.28	0.17	1.14	0.16
RB 01-67S	0.31	0.92	0.13	0.88	0.13
RB 01-68S	0.28	0.90	0.13	0.86	0.14
RB 01-69S	0.28	0.82	0.13	0.79	0.12
RB 01-70S	0.19	0.57	0.09	0.63	0.06
RB 01-71S	0.15	0.45	0.07	0.54	0.05
RB 01-72S	0.42	1.34	0.19	1.33	0.19
RB 01-73S	0.17	0.59	0.08	0.54	0.04
RB 01-74S	0.18	0.66	0.10	0.65	0.08
RB 01-75S	0.45	1.27	0.22	1.33	0.20
RB 01-76S	0.47	1.45	0.21	1.30	0.21
RB 01-77S	0.39	1.13	0.17	1.19	0.16
RB 01-78S	0.77	2.43	0.36	2.23	0.33
RB 01-79S	0.80	2.41	0.34	2.30	0.36
RB 01-80S	0.82	2.35	0.35	2.28	0.36
RB 01-81S	0.42	1.36	0.18	1.32	0.20
RB 01-82S	0.21	0.67	0.09	0.89	0.09
RB 01-83S	0.22	0.70	0.10	0.71	0.10
RB 01-84S	0.47	1.42	0.23	1.36	0.21
RB 01-85S	0.36	1.07	0.16	0.88	0.14
RB 01-86S	0.64	2.03	0.31	2.06	0.31
RB 01-87S	0.52	1.67	0.25	1.49	0.24
RB 01-88S	0.74	2.18	0.32	2.09	0.31
RB 01-89S	0.28	0.95	0.13	0.81	0.13
RB 01-90S	0.56	1.80	0.28	1.55	0.25
RB 01-91S	0.58	1.87	0.28	1.76	0.28
RB 01-92S	0.80	2.47	0.37	2.66	0.41
RB 01-93S	0.70	2.05	0.28	2.01	0.32
RB 01-94S	0.75	2.38	0.32	2.32	0.33
RB 01-95S	0.75	2.03	0.31	2.00	0.30
RB 01-96S	0.99	2.68	0.36	2.55	0.38
RB 01-97S	0.80	2.42	0.35	2.47	0.36
RB 01-98S	0.40	1.18	0.18	1.19	0.16
RB 01-99S	0.50	1.38	0.18	1.36	0.20
RB 01-100S	0.82	2.54	0.35	2.50	0.39
RB 01-101S	0.50	1.48	0.23	1.46	0.22
RB 01-102S	0.40	1.18	0.19	1.14	0.20
RB 01-103S	0.35	1.02	0.14	0.99	0.13
RB 01-104S	0.33	1.01	0.17	0.99	0.13
RB 01-105S	0.63	1.74	0.29	2.00	0.27
RB 01-106S	0.42	1.40	0.18	1.22	0.18
RB 01-107S	1.00	3.00	0.45	3.03	0.48
RB 01-108S	0.60	1.75	0.25	1.71	0.28
RB 01-108S	0.51	1.65	0.24	1.71	0.25
RB 01-110S	0.75	2.27	0.33	2.23	0.33
RB 01-111S	0.63	2.07	0.29	1.87	0.28
RB 01-112S	0.55	1.68	0.21	1.57	0.25
RB 01-113S	0.47	1.27	0.22	1.42	0.22
RB 01-114S	0.48	1.50	0.20	1.30	0.19
RB 01-115S	0.71	2.17	0.31	2.27	0.32
RB 01-116S	0.70	1.90	0.25	1.60	0.27
RB 01-117S	0.55	1.57	0.23	1.49	0.22
RB 01-118S	0.19	0.55	0.09	0.51	0.07
RB 01-119S	0.84	2.49	0.39	2.16	0.33

[illegible]

Enhanced Pak

Sample ID

Sample 10

RB 01-120S

Enhanced Pax						Lithophile Elements:								P.G.E.s:							
Sample ID	Ho	Er	Tm	Yb	Lu	Sr	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt			
RB 01-120S	0.40	1.40	0.20	1.30	0.19		9.5	0.6	-10	856.0	21.7	562.0	0.26	821.0	-0.5	0.5	0.5	-0.5			
RB 01-121S	0.36	1.05	0.16	1.02	0.14		9.0	0.9	-10	3690.0	45.4	465.0	0.55	1380.0	-0.5	-0.5	-0.5	-0.5			
RB 01-122S	0.80	2.65	0.36	2.46	0.37		11.4	0.9	-10	1380.0	40.8	744.0	0.29	914.0	-0.5	-0.5	-0.5	-0.5			
RB 01-123S	0.28	0.89	0.11	0.87	0.09		10.2	2.6	-10	5260.0	88.6	472.0	1.54	3450.0	-0.5	-0.5	-0.5	-0.5			
RB 01-124S	0.61	1.86	0.24	1.54	0.26		5.3	0.9	-10	951.0	42.3	645.0	0.27	1350.0	-0.5	-0.5	-0.5	-0.5			
RB 01-125S	0.17	0.57	0.08	0.53	0.07		24.0	1.3	-10	420.0	129.0	682.0	1.29	1330.0	-0.5	-0.5	-0.5	-0.5			
RB 01-126S	0.82	2.51	0.38	2.46	0.39		13.9	0.8	-10	935.0	4.8	965.0	0.16	802.0	-0.5	-0.5	-0.5	-0.5			
RB 01-127S	0.46	1.47	0.21	1.41	0.18		7.6	1.1	-10	1810.0	34.2	589.0	0.46	1160.0	-0.5	-0.5	-0.5	-0.5			
RB 01-128S	0.37	1.15	0.15	1.14	0.17		9.8	1.1	-10	941.0	20.6	595.0	0.64	1190.0	-0.5	-0.5	-0.5	-0.5			
RB 01-129S	0.32	0.90	0.11	0.81	0.11		5.8	0.9	-10	3320.0	13.6	692.0	0.16	875.0	-0.5	-0.5	-0.5	-0.5			
RB 01-130S	0.59	1.77	0.27	1.83	0.27		13.1	0.9	-10	1610.0	19.4	650.0	0.40	1180.0	-0.5	-0.5	-0.5	-0.5			
RB 01-131S	0.61	1.86	0.29	1.89	0.28		10.5	1.0	-10	1070.0	12.0	682.0	0.39	950.0	-0.5	-0.5	-0.5	-0.5			
RB 01-132S	0.71	2.31	0.34	2.22	0.36		9.3	0.8	-10	975.0	20.4	649.0	0.29	1190.0	-0.5	-0.5	-0.5	-0.5			
RB 01-133S	0.26	0.91	0.13	0.88	0.13		15.5	0.4	-10	221.0	26.7	629.0	0.24	710.0	-0.5	-0.5	-0.5	-0.5			
RB 01-134S	0.74	2.19	0.35	2.02	0.31		9.6	1.2	-10	567.0	63.3	837.0	0.04	1680.0	-0.5	-0.5	-0.5	-0.5			
RB 01-135S	0.13	0.38	0.06	0.35	0.04		25.8	1.1	-10	314.0	49.0	302.0	0.26	1030.0	-0.5	-0.5	-0.5	-0.5			
RB 01-136S	0.26	0.75	0.12	0.70	0.11		27.7	1.4	-10	4420.0	69.4	511.0	0.38	1510.0	-0.5	-0.5	-0.5	-0.5			
RB 01-137S	0.21	0.61	0.09	0.60	0.08		10.7	0.9	-10	346.0	25.0	588.0	0.26	1340.0	-0.5	-0.5	-0.5	-0.5			
RB 01-138S	0.26	0.78	0.13	0.75	0.11		4.6	0.6	-10	1820.0	16.3	462.0	0.13	1320.0	-0.5	-0.5	-0.5	-0.5			
RB 01-139S	0.54	1.55	0.24	1.44	0.23		7.9	0.8	-10	396.0	36.5	723.0	0.34	1480.0	-0.5	-0.5	-0.5	-0.5			
RB 01-140S	0.38	1.22	0.18	1.27	0.17		11.7	0.9	-10	855.0	44.6	693.0	0.58	991.0	-0.5	-0.5	-0.5	-0.5			
RB 01-141S	0.62	1.93	0.29	1.78	0.23		8.2	1.2	-10	974.0	49.5	807.0	0.72	1470.0	-0.5	-0.5	-0.5	-0.5			
RB 01-142S	0.60	1.93	0.26	1.76	0.28		16.7	1.0	-10	1940.0	90.0	596.0	0.87	1130.0	-0.5	-0.5	-0.5	-0.5			
RB 01-143S	0.62	1.99	0.27	2.05	0.30		7.6	0.6	-10	350.0	33.9	836.0	0.38	806.0	-0.5	-0.5	-0.5	-0.5			
RB 01-144S	0.61	1.83	0.28	1.63	0.22		6.6	0.4	-10	4390.0	49.1	1100.0	0.32	1330.0	-0.5	-0.5	-0.5	-0.5			
RB 01-145S	0.71	2.09	0.33	2.32	0.37		15.0	1.2	-10	1140.0	24.0	978.0	0.64	1720.0	-0.5	-0.5	-0.5	-0.5			
RB 01-146S	0.65	2.20	0.27	1.86	0.30		15.6	1.3	-10	374.0	22.9	760.0	0.50	1590.0	-0.5	-0.5	-0.5	-0.5			
RB 01-147S	0.61	1.85	0.29	1.99	0.27		14.7	0.6	-10	4370.0	8.6	844.0	0.09	798.0	-0.5	1.6	-0.5	-0.5			
RB 01-148S	0.65	2.10	0.31	2.15	0.35		16.9	1.0	-10	198.0	24.3	703.0	0.51	1220.0	-0.5	-0.5	-0.5	-0.5			
RB 01-149S	0.71	2.39	0.35	2.02	0.37		5.4	0.6	-10	880.0	14.1	594.0	0.16	556.0	-0.5	-0.5	-0.5	-0.5			
RB 01-150S	0.12	0.44	0.07	0.39	0.06		36.6	1.1	-10	3780.0	88.6	267.0	1.23	1460.0	-0.5	-0.5	-0.5	-0.5			
RB 01-151S	0.49	1.40	0.20	1.41	0.22		8.9	0.9	-10	121.0	18.5	874.0	0.19	1120.0	-0.5	-0.5	-0.5	-0.5			
RB 01-152S	0.73	2.29	0.33	2.43	0.38		23.0	0.6	-10	651.0	20.6	603.0	0.33	1330.0	-0.5	-0.5	-0.5	-0.5			
RB 01-153S	0.65	1.95	0.26	1.88	0.29		7.8	0.9	-10	968.0	9.1	867.0	0.07	1420.0	-0.5	-0.5	-0.5	-0.5			
RB 01-154S	0.18	0.46	0.07	0.45	0.06		3.9	1.3	-10	807.0	73.4	702.0	0.56	1850.0	-0.5	-0.5	-0.5	-0.5			
RB 01-155S	0.87	2.52	0.36	2.53	0.43		7.1	1.2	-10	431.0	11.3	1190.0	0.17	655.0	-0.5	-0.5	-0.5	-0.5			
RB 01-156S	0.65	1.88	0.30	2.12	0.30		7.7	1.1	-10	295.0	24.6	707.0	0.32	652.0	-0.5	-0.5	-0.5	-0.5			
RB 01-157S	0.53	1.52	0.22	1.45	0.23		7.6	1.4	-10	312.0	49.2	827.0	0.65	1100.0	-0.5	-0.5	-0.5	-0.5			
RB 01-158S	0.61	1.75	0.26	1.87	0.29		12.9	0.6	-10	228.0	30.9	845.0	0.37	610.0	-0.5	-0.5	-0.5	-0.5			
RB 01-159S	0.64	1.82	0.29	2.04	0.31		10.6	1.1	-10	513.0	45.6	954.0	1.53	1340.0	-0.5	-0.5	-0.5	-0.5			
RB 01-160S	0.40	1.22	0.18	1.19	0.20		3.1	1.0	-10	167.0	31.2	1000.0	0.31	795.0	-0.5	-0.5	-0.5	-0.5			
RB 01-161S	0.72	2.06	0.31	2.21	0.36		9.6	0.5	-10	717.0	22.9	566.0	0.31	1030.0	-0.5	-0.5	-0.5	-0.5			
RB 01-162S	0.37	1.15	0.15	1.09	0.15		9.8	1.0	-10	1180.0	23.4	558.0	0.38	1260.0	-0.5	-0.5	-0.5	-0.5			
RB 01-163S	0.25	0.65	0.10	0.80	0.12		6.8	1.0	-10	2000.0	40.9	684.0	0.38	1700.0	-0.5	-0.5	-0.5	-0.5			
RB 01-164S	0.25	0.75	0.12	0.83	0.12		30.7	0.7	-10	3280.0	68.5	804.0	0.50	1310.0	-0.5	-0.5	-0.5	-0.5			
RB 01-165S	0.33	1.09	0.16	1.01	0.19		5.5	0.7	-10	598.0	15.0	1160.0	0.14	808.0	-0.5	-0.5	-0.5	-0.5			
RB 01-166S	0.70	2.16	0.32	2.25	0.33		14.2	1.5	-10	1520.0	27.4	868.0	0.29	1460.0	-0.5	-0.5	-0.5	-0.5			
RB 01-167S	0.10	0.26	0.04	0.24	0.03		10.1	0.7	-10	1750.0	25.0	538.0	0.28	1090.0	-0.5	-0.5	-0.5	-0.5			
RB 01-168S	0.14	0.49	0.08	0.52	0.06		4.1	0.6	-10	6660.0	88.4	704.0	0.71	1730.0	-0.5	-0.5	-0.5	-0.5			
RB 01-169S	0.16	0.51	0.08	0.57	0.08		11.7	0.8	-10	723.0	64.6	803.0	0.78	1630.0	-0.5	-0.5	-0.5	-0.5			
RB 01-170S	1.21	3.89	0.57	3.93	0.65		25.5	1.2	-10	734.0	27.8	982.0	0.25	1790.0	-0.5	-0.5	-0.5	-0.5			
RB 01-171S	1.06	3.35	0.48	3.29	0.52		9.4	0.8	-10	2010.0	12.3	1030.0	0.11	1360.0	-0.5	-0.5	-0.5	-0.5			
RB 01-172S	0.57	1.74	0.28	1.69	0.29		11.4	0.5	-10	2500.0	8.9	1340.0	0.09	1280.0	-0.5	-0.5	-0.5	-0.5			
RB 01-173S	0.57	1.62	0.20	1.49	0.19		1.8	0.5	-10	451.0	3.3	1150.0	0.03	670.0	-0.5	-0.5	-0.5	-0.5			
RB 01-174S	0.65	1.93	0.28	1.85	0.29		3.7	0.8	-10	4840.0	24.1	1210.0	0.30	1380.0	-0.5	-0.5	-0.5	-0.5			

Sample ID	Ho	Er	Tm	Yb	Lu
RB 01-230S	0 10	0 35	0 06	0 39	0 03
RB 01-231S	0 10	0 34	0 06	0 37	0 02
RB 01-232S	0 14	0 49	0 09	0 46	0 05
RB 01-233S	0 44	1 42	0 24	1 29	0 20
RB 01-234S	0 93	3 18	0 45	3 41	0 48
RB 01-235S	0 27	0 96	0 14	0 94	0 11
RB 01-236S	0 14	0 45	0 06	0 39	0 04
RB 01-237S	0 40	1 17	0 16	1 11	0 16
RB 01-238S	0 82	2 77	0 39	2 93	0 44
RB 01-239S	0 10	0 43	0 05	0 37	0 02
RB 01-240S	0 20	0 59	0 11	0 73	0 07
RB 01-241S	0 15	0 55	0 08	0 48	0 04
RB 01-242S	0 12	0 37	0 10	0 35	0 11
RB 01-243S	0 08	0 27	0 06	0 25	0 04
RB 01-244S	0 27	0 82	0 14	0 72	0 09
RB 01-245S	0 23	0 70	0 12	0 72	0 08
RB 01-246S	0 10	0 29	0 06	0 34	-0 01
RB 01-247S	0 15	0 53	0 10	0 53	0 05
RB 01-248S	0 09	0 39	0 05	0 41	0 02
RB 01-249S	0 08	0 36	0 05	0 43	0 03
RB 01-250S	0 03	0 17	0 03	0 20	-0 01
RU 01-251S	0 07	0 36	0 07	0 37	0 03
RB 01-252S	0 27	1 09	0 16	0 94	0 13
RB 01-253S	0 37	1 28	0 20	1 73	0 14
RB 01-254S	0 16	0 62	0 10	0 56	0 05
RB 01-255S	0 16	0 55	0 10	0 57	0 04
RB 01-256S	0 13	0 51	0 07	0 55	0 05
RB 01-257S	0 38	1 18	0 19	1 41	0 16
RB 01-258S	0 18	0 67	0 12	0 57	0 08
RB 01-259S	0 20	0 81	0 11	0 74	0 08
RB 01-260S	0 29	0 95	0 13	0 92	0 12
RB 01-261S	0 14	0 54	0 07	0 46	0 02
RB 01-262S	0 05	0 26	0 04	0 22	-0 01
RB 01-263S	0 45	1 36	0 20	1 41	0 18
RB 01-264S	0 03	0 23	0 04	0 19	-0 01
RB 01-265S	0 03	0 25	0 04	0 15	-0 01
RB 01-266S	0 17	0 60	0 10	0 61	0 04
RB 01-267S	0 19	0 74	0 10	0 69	0 05
RB 01-268S	0 07	0 33	0 06	0 31	-0 01
RU 01-269S	0 24	0 80	0 13	0 75	0 08
RB 01-270S	0 25	0 84	0 12	0 86	0 08
RB 01-271S	0 04	0 15	0 04	0 18	-0 01
RB 01-273S	0 39	1 22	0 16	1 09	0 13
RB 01-274S	0 10	0 46	0 08	0 50	0 03
RB 01-275S	0 34	1 13	0 17	1 03	0 15
RB 01-276S	0 24	0 77	0 12	0 69	0 10
RB 01-277S	0 29	1 00	0 18	0 99	0 12
RB 01-278S	0 16	0 63	0 09	0 51	0 03
RB 01-279S	0 11	0 48	0 06	0 49	0 03
RB 01-280S	0 12	0 43	0 06	0 40	0 04
RB 01-281S	0 29	0 94	0 13	1 00	0 13
RB 01-282S	0 21	0 71	0 11	0 63	0 06
RU 01-283S	0 14	0 55	0 09	0 54	0 05
RU 01-284S	0 69	1 99	0 31	1 95	0 24
RB 01-285S	0 23	0 71	0 11	0 76	0 11

Lithophilic Elements									P.G.E.s				
SQ	Li	Be	SQ	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Rd	Os	Pt
6.1	0.5	-10	1230.0	65.5	477.0	0.36	1440.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
5.7	1.1	-10	705.0	19.8	501.0	0.15	1140.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
6.9	0.8	-10	4030.0	30.3	416.0	0.16	1650.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
13.2	0.5	-10	1020.0	23.2	682.0	0.15	960.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
19.0	1.1	-10	1150.0	23.3	700.0	0.23	834.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
9.6	0.3	-10	1940.0	20.9	642.0	0.14	1120.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
7.9	1.1	-10	3380.0	31.1	638.0	0.20	846.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
12.1	1.0	-10	1590.0	32.8	622.0	0.18	1420.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
31.9	1.2	-10	541.0	55.7	480.0	0.70	1280.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
9.2	0.9	-10	3680.0	61.7	444.0	0.22	1320.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
3.1	0.6	-10	145.0	18.5	505.0	0.09	1130.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
3.3	0.7	-10	1550.0	26.6	513.0	0.11	835.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
13.7	0.4	-10	525.0	61.3	452.0	0.73	1400.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
10.8	1.1	-10	319.0	5.2	423.0	0.19	850.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
13.2	1.0	-10	582.0	19.6	543.0	0.21	826.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
8.9	1.1	-10	466.0	46.2	891.0	0.23	982.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
5.7	0.5	-10	1010.0	36.4	420.0	0.14	667.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
10.3	0.8	-10	522.0	61.4	532.0	0.29	1390.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
10.7	1.0	-10	3350.0	116.0	526.0	5.35	943.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
8.5	1.2	-10	8400.0	114.0	573.0	4.39	1010.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
23.8	0.7	-10	3040.0	44.5	416.0	0.42	1500.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
14.4	0.5	-10	3370.0	50.8	475.0	0.17	1180.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
7.5	0.6	-10	922.0	57.4	586.0	0.36	1230.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
7.6	1.2	-10	3480.0	59.0	471.0	0.40	2100.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
24.0	0.7	-10	1910.0	27.8	537.0	0.10	1500.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
9.2	0.9	-10	1720.0	3.2	466.0	-0.01	950.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
28.0	0.7	-10	2460.0	39.7	445.0	0.19	1560.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
6.8	0.5	-10	2740.0	17.7	692.0	-0.01	1200.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
10.8	0.9	-10	3100.0	25.7	382.0	0.06	1080.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
6.1	0.3	-10	1690.0	11.2	602.0	0.05	938.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
18.8	0.8	-10	320.0	25.9	616.0	0.10	843.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
13.1	1.3	-10	2040.0	37.8	544.0	0.27	1140.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
12.2	0.7	-10	1160.0	21.2	521.0	0.30	1040.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
22.3	1.1	-10	1630.0	16.2	626.0	0.18	1340.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
11.9	0.9	-10	3330.0	11.7	341.0	-0.01	971.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
4.8	1.1	-10	13600.0	136.0	494.0	0.88	1030.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
5.6	1.6	-10	6470.0	7.0	985.0	0.10	2330.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
8.5	1.3	-10	11200.0	67.6	917.0	0.43	1400.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
8.2	1.2	-10	29600.0	86.5	940.0	0.49	2230.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
4.8	0.9	-10	1260.0	18.3	631.0	0.07	471.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
8.2	1.3	-10	2180.0	89.6	448.0	0.41	1760.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
14.0	1.1	-10	2440.0	26.5	386.0	0.08	1550.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
5.9	0.9	-10	302.0	6.6	752.0	-0.01	525.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
29.3	1.5	-10	1540.0	38.2	549.0	0.43	971.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
5.6	0.8	-10	3080.0	11.2	690.0	0.15	1380.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
1.5	0.5	-10	1930.0	72.0	591.0	0.33	810.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
2.5	0.7	-10	2530.0	17.4	739.0	0.05	1670.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
9.7	0.5	-10	3990.0	46.7	778.0	0.24	1100.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
11.3	1.4	-10	1680.0	35.7	562.0	0.45	1750.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
2.5	0.7	-10	7380.0	61.1	506.0	0.36	1380.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
2.6	0.9	-10	5140.0	56.1	589.0	0.27	1690.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
8.7	1.0	-10	2080.0	35.4	540.0	0.43	1520.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
3.2	0.9	-10	3560.0	76.7	661.0	0.38	1870.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
6.8	1.2	-10	916.0	10.6	842.0	0.10	1150.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5
5.4	1.8	-10	918.0	74.0	852.0	1.13	1730.0	Cs	-0.5	-0.5	-0.5	-0.5	-0.5

Sample ID:	Ho	Er	Tm	Yb	Lu
RB 01-286S	0.15	0.52	0.08	0.54	0.05
RB 01-287S	0.36	1.18	0.18	1.21	0.15
RB 01-288S	0.07	0.29	0.05	0.32	-0.01
RB 01-289S	0.50	1.73	0.29	1.92	0.22
RB 01-290S	0.47	1.56	0.21	1.36	0.18
RB 01-291S	0.54	1.89	0.32	1.88	0.33
RB 01-292S	0.45	1.55	0.23	1.34	0.22
RB 01-293S	0.31	0.97	0.18	1.09	0.13
RB 01-294S	0.36	1.29	0.19	1.13	0.14
RB 01-295S	0.48	1.81	0.24	1.49	0.20
RB 01-296S	0.16	0.58	0.09	0.57	0.08
RB 01-297S	0.12	0.52	0.10	0.34	0.04
RB 01-298S	0.05	0.41	0.07	0.30	-0.01
RB 01-299S	0.10	0.39	0.06	0.32	-0.01
RB 01-300S	0.15	0.83	0.08	0.55	0.04
RB 01-301S	0.28	0.82	0.15	0.84	0.08
RB 01-302S	0.40	1.38	0.22	1.16	0.18
RB 01-303S	0.25	0.89	0.15	0.99	0.09
RB 01-304S	0.35	1.26	0.18	1.31	0.16
RB 01-305S	1.09	3.31	0.49	2.91	0.53
RB 01-306S	0.19	0.66	0.11	0.58	0.04
RB 01-307S	0.75	2.43	0.31	2.37	0.30
RB 01-308S	0.83	2.81	0.39	2.40	0.37
RB 01-309S	0.20	0.74	0.14	0.68	0.05
RB 01-310S	0.13	0.65	0.10	0.63	0.03
RB 01-311S	0.34	1.16	0.20	1.13	0.14
RB 01-312S	0.05	0.33	0.06	0.21	-0.01
RB 01-313S	0.31	1.19	0.17	0.99	0.14
RB 01-314S	0.51	1.84	0.28	1.65	0.21
RB 01-315S	0.28	1.01	0.17	1.10	0.09
RB 01-316S	0.11	0.45	0.07	0.44	0.04

S	Q	Li	Be	S	Q	Sc	Mn	Rb	Sr	Cs	Ba
15.8	0.8	-10	385.0	26.2	789.0	0.59	1310.0				
9.3	1.1	-10	639.0	10.3	748.0	0.04	612.0				
3.9	0.2	-10	111.0	53.0	287.0	0.25	578.0				
8.2	0.7	-10	1140.0	9.9	494.0	0.09	621.0				
3.7	0.6	-10	987.0	6.4	535.0	0.02	492.0				
10.8	0.6	-10	741.0	10.9	342.0	0.32	565.0				
10.2	0.5	-10	1310.0	8.2	368.0	0.03	515.0				
2.6	0.2	-10	1050.0	11.0	477.0	0.05	581.0				
1.8	0.5	-10	853.0	5.7	521.0	-0.01	835.0				
8.7	0.5	-10	1330.0	2.5	445.0	-0.01	734.0				
4.6	0.4	-10	1190.0	5.7	255.0	-0.01	635.0				
7.2	0.1	-10	2420.0	20.7	237.0	-0.01	499.0				
3.2	1.0	-10	1010.0	35.6	531.0	0.13	1130.0				
9.0	0.3	-10	745.0	19.6	255.0	0.05	605.0				
6.3	0.2	-10	5130.0	51.7	408.0	0.15	655.0				
5.3	0.7	-10	1290.0	19.9	385.0	0.03	730.0				
11.0	0.9	-10	444.0	12.1	520.0	-0.01	691.0				
7.1	0.6	-10	1070.0	13.4	359.0	0.04	804.0				
11.1	0.9	-10	1490.0	14.8	590.0	0.01	685.0				
9.5	0.7	-10	173.0	11.8	839.0	0.07	508.0				
14.2	0.8	-10	130.0	18.0	1970.0	0.08	1240.0				
12.5	1.1	-10	1340.0	5.5	1580.0	0.03	1770.0				
6.1	1.0	-10	1590.0	6.8	1200.0	0.02	830.0				
15.7	1.0	-10	2990.0	8.8	302.0	0.07	1'330.0				
18.8	0.4	-10	2030.0	22.4	272.0	0.03	947.0				
10.2	0.8	-10	336.0	18.0	483.0	0.07	645.0				
23.8	0.6	-10	773.0	7.5	299.0	-0.01	548.0				
8.3	1.0	-10	727.0	9.5	411.0	-0.01	881.0				
8.1	0.4	-10	553.0	14.2	601.0	0.02	899.0				
16.8	1.5	-10	407.0	17.8	336.0	0.16	1040.0				
3.6	1.5	-10	518.0	37.0	581.0	0.56	956.0				

[illegible]

17-Aug-01

ECO-TECH LABORATORIES LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

ICP CERTIFICATE OF ANALYSIS AK 2001-246

RAGNAR BRUASET
5851 Halifax Street
BURNABY, BC
V5B 2P4

Phone: 250-573-5700
Fax : 250-573-4557

ATTENTION: RAGNAR BRUASET

No. of samples received: 2
Sample type: Rock
Project #: None Given
Shipment #: None Given
Samples submitted by: Ragnar Bruaset

Values in ppm unless otherwise reported

Et #.	Tag #	Sample		Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
		Weight (g)	Au(ppb)																												
1	RB 2001-400R	4801	25	<0.2	0.54	5	45	<5	5.98	<1	21	29	210	5.05	<10	2.72	945	<1	0.03	11	1640	<2	<5	<20	409	<0.01	<10	91	<10	<1	32
2	RB 2001-453R	5070	10	<0.2	0.18	5	1460	<5	2.11	<1	6	107	5	1.72	<10	0.50	542	2	0.02	6	870	8	5	<20	107	<0.01	<10	15	<10	<1	44

1 at 2001 GRID POINT: L21W 4+565
2 at " " " L15W 25+165

QC DATA:

Resplit:

1	RB 2001-400R	25	<0.2	0.55	15	40	<5	5.83	<1	21	38	213	4.99	<10	2.66	929	2	0.03	13	1640	2	<5	60	394	<0.01	<10	90	<10	<1	32
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Repeat:

1	RB 2001-400R	-	<0.2	0.53	15	40	<5	5.90	<1	21	29	213	5.02	<10	2.69	937	<1	0.03	11	1610	<2	<5	60	399	<0.01	<10	90	<10	<1	32
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Standard:

GEO'01	125	1.0	1.63	60	140	<5	1.54	<1	19	55	86	3.42	<10	0.88	658	<1	0.02	25	710	20	10	40	62	0.10	<10	70	<10	<1	78
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FP/kk
dlf/239
XLS/01
Fax: 804-294-3588


ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer